M E M O R A N D U M

600 NORTHEAST GRAND AVENUE PORTLAND, OREGON 97232 2736
TEL 503 797 1700 FAX 503 797 1794

METRO

DATE: December 1, 2006

TO: TPAC and Interested Persons

FROM: Kim Ellis, Principal Transportation Planner

SUBJECT: RTP Finance Fact Base – TPAC Review Draft

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Background

Attached is a TPAC review draft of the RTP Finance Fact Base Report prepared by the ECONorthwest Team.

Action Requested

Local government, ODOT and Trimet staff are requested to review the Finance Fact Base completed to date and to provide comments on the finance data assumptions used from the ODOT and local government survey information provided last fall.

Next Steps

An updated report will be presented to JPACT for discussion on December 14. The report will inform future policy discussions by JPACT and the Metro Council and the update to financially constrained revenue forecast in 2007. Comments received by December 5 will be forwarded to the consultant team for inclusion in the December 14 report to JPACT.

If you have any questions about the 2035 RTP update process, contact me at (503) 797-1617 or by e-mail at ellisk@metro.dst.or.us.

Financial Fact Base:

Baseline Financial Evaluation to Support the 2035 RTP Update

Prepared for

METRO
PEOPLE PLACES • OPEN SPACES

by

ECONorthwest

99 W. Tenth, Suite 400
Eugene, OR 97401
(541) 687-0051

November 2006
TPAC REVIEW DRAFT

Chapter 1 Introduction

This Financial Fact Base report is part of the 2035 update of the Regional Transportation Plan. It was prepared by ECONorthwest, with assistance from Kittelson and Associates and Steve Siegel. It is a precursor and potential appendix to what will eventually become the Financial Element of the Regional Transportation Plan.

BACKGROUND

This *Financial Fact Base* report is part of the 2035 update of the Regional Transportation Plan (RTP). Metro is updating the RTP as part of the New Look at regional choices to support the goals of the Region 2040 Growth Concept. The RTP is a 20- to 30-year plan[1] that guides investments in the region's transportation system. It establishes policies and priorities for projects to improve the movement of people and freight by all modes of travel—motor vehicle, transit, rail, pipeline, walking, and bicycling.

The bulk of people and freight using the transportation system are traveling on roads in cars, trucks, and buses. In addition, many walkways and bicycle facilities are part of the roadway system. The roadway system in the United States is primarily owned and operated by the public sector. While the system of freeways, highways, and streets function as a single system, it is the joint responsibility of federal, state, and local governments to build and maintain this system.

Road systems in urban areas are extensive and cross many jurisdictions. Efficiently building and maintaining such a complex system requires planning to coordinate the investments of multiple jurisdictions. Large urban areas are required by federal and state law to coordinate plans for transportation improvements at a regional level.[2] The RTP serves this function by considering long-run transportation needs at a regional level and identifying policies, programs, and projects to meet these needs. The plans of local jurisdictions responsible for the transportation system in the Portland region must be consistent with policies, programs, and projects identified in the RTP. In addition, projects must be in the RTP to be eligible for most federal and state funding programs.

While measures in an RTP can include policies, strategies, and programs, the focus of an RTP is usually on *capital investments* to improve existing roadways, construct new roadways, and improve transit service. A key requirement for

[1] The planning period for the RTP is roughly 25 years. The RTP is scheduled to be adopted in 2007; 25 years forward would be 2032; Metro pushed the date out to 2035 to accommodate that fact that most of its modeling is done in five-year increments, with forecasts for years ending in 0 and 5.

[2] Planning, in addition to being a good idea, is the law. Much of the funding for metropolitan transportation systems comes from the federal government. As a condition of that funding, the federal government (through the US Department of Transportation and the Federal Highway Administration) requires metropolitan areas with more than 50,000 people to form a Metropolitan Planning Organization (MPO) and to have that MPO develop a metropolitan transportation plan with at least a 20-year planning horizon.

regional transportation plans is that they be *fiscally constrained*—the cost of activities identified in the RTP cannot exceed the level of funding considered reasonably available in the region.

The cost of all projects in a region that could contribute to improvements in reliability, accessibility and safety almost always exceeds the financial resources considered *reasonably available* to pay for the projects. For these reasons, the biggest and defining task of an RTP is to select and prioritize projects within the constraint of available funding.

To address the requirement for fiscal constraint, RTPs have a chapter or technical appendix that estimates the level of funding that is reasonably available in the region. This document (the one you are reading now) is not that chapter. Rather, this document, referred to as the *Financial Fact Base*, is a precursor to what will be the financial element of the RTP. The purpose of this *Financial Fact Base* is to provide a financial context for the discussion and evaluation of projects that will occur in Winter and Spring 2007. It is likely that this *Financial Fact Base* will be amended in the future so that it can be used as technical appendix to the RTP.

Thus, this *Fact Base* does not make recommendations about what funding level is "reasonably available" in the Metro region. The focus of this report is to put some bounds on the range of possible revenue so that "reasonably available" funding sources and the fiscally constrained plan they imply can be decided on in Spring of 2007.

This *Financial Fact Base* focuses on compiling information that can be used to estimate the level of funding reasonably available for transportation needs in the Portland region through the planning period for the RTP, which extends to 2035. To this end, this report:

- Summarizes current revenues and expenditures for transportation in the Metro region by each level of government—federal, state, and local
- Forecasts revenues available to jurisdictions that operate and maintain transportation facilities and services in the Metro region
- Summarizes existing information about future costs to operate, maintain, and improve the region's transportation system.

Later work by Metro will provide more detail about the future costs to maintain and improve transportation services in the region. Ultimately, the estimate of reasonably available funding and project costs will be brought together as the fiscally-constrained set of projects selected for the 2035 RTP.

FRAMEWORK FOR THINKING ABOUT TRANSPORTATION FUNDING

Building and maintaining the transportation system is a joint responsibility of federal, state, and local governments. Projects to improve the transportation system are funded through a mix of federal, state, and local revenues distributed

through a variety of funding programs that dictate how this revenue can be spent. In addition to revenue generation and spending by multiple jurisdictions, revenue sharing among jurisdictions and cooperation among multiple jurisdictions on individual projects makes describing transportation finance complicated.

The evaluation of transportation funding in this report is organized primarily by the level of government making expenditures to support the transportation system in the Metro region—state, regional, and local. At each level of government, we describe the sources of transportation revenues and the types of expenditures these revenues are used for. Identifying the sources of revenue and types of expenditures at each level of government adds layers of detail that are complicated but important for estimating future funding available in the region for several reasons:

- The growth rate of future revenue will vary for each revenue source. The growth of revenue from any one source will depend on conditions affecting the ultimate source of that revenue and potential policy decisions by elected officials.
- Some transportation revenue sources have restrictions on their use. System Development Charges, for example, can only be used for capital improvements needed to accommodate new development while gas tax revenue can be used for a wide range of road-related expenditures. Tracking and forecasting revenue by source is important for knowing what types of future expenditures can be funded by each source.
- The current level of expenditures by type at each level of government reflect decisions to allocate revenues among competing demands, and are thus indicative of likely future allocations of revenues.
- Current expenditures on operation, maintenance and preservation of the existing system indicate the level of expenditures that will be needed in the future. Future expenditures on operation, maintenance and preservation of the transportation system will affect the level of funding available for improvements to the system.

This report describes revenues by source and expenditures by type for each level of government funding transportation systems in the Metro region. The description of current revenues and expenditures in Chapter 2 will be general in order to provide an overall context for understanding transportation finance in the region. Chapters 3 and 4 in this report will provide more detail about factors affecting the growth of future revenues and costs in the region. Chapter 3 will also provide a forecast of future transportation revenue available in the Metro region, restrictions associated with specific funding sources, and implications for transportation planning in the region.

In this report we make a distinction between the terms “funding” and “financing,” which often get used interchangeably. Providing transportation facilities and services costs money, and somebody has to pay for these costs. The ultimate source of revenue for these costs is *funding*. When the funds for transportation costs are borrowed and paid back over time, then these costs have been *financed*. Public agencies finance costs for the same reasons as households

and businesses—to reduce the current out-of-pocket costs by spreading out payments over time. But the ultimate source of funding for financed costs is not the financing instrument itself—bonds—but rather the revenue sources used to repay the borrowed funds.

Since financed costs must be paid back over time, financing costs cannot increase the total amount of funding available in a region over a long-term planning period such as the one used in this report. Financing costs merely makes future funding available earlier, at the cost of the interest charged to borrow the funds. Since financing costs actually decreases the level of future funding available for transportation by adding the cost of interest, this report focuses on the level of funding that will be available in the future without considering the effect of using that revenue to finance costs earlier in the planning period. While this report stays with the common term of a "financial" fact base, it is in fact primarily about funding.

ORGANIZATION OF THIS REPORT

This report is the *Financial Fact Base.* It is an interim technical report that is part of Metro's process for developing a Regional Transportation Plan. The rest of the report is organized into five chapters:

- **Chapter 2 Current Funding for Transportation in the Metro Region**, gives an overview of how transportation facilities and services are currently funded in the Metro region. This chapter provides an overview of transportation funding and summarizes revenues and expenditures for transportation in the region at each level of government.
- **Chapter 3 Future Transportation Revenues in the Metro Region** forecasts revenues that will be available to jurisdictions for operation and improvement of the transportation system in the Metro region over the planning horizon of the RTP.
- **Chapter 4 Future Transportation Costs in the Metro Region** relies on existing information to describe the level of future costs to operate, maintain, and improve the transportation system in the Metro region.
- **Chapter 5 Funding Gap for Transportation Needs in the Metro Region** discusses measures to address the potential gap between reasonably available revenues and the cost of transportation needs in the Metro region.
- **Appendix A, Glossary,** gives a brief definition of many acronyms and phrases used in the *Financial Fact Base*. Many of the entries concern funding sources or local transportation agencies and plans.
- **Appendix B, Requirements for Financial Elements of Transportation Plans,** highlights the Federal, State and Regional guidelines behind the development and adoption of a regional transportation plan. Among these requirements is the creation of a financial plan that prioritizes projects based upon reasonable and reliable estimates of future costs and revenue.

- **Appendix C, Methods Memo,** is a deliverable that ECO created for Metro in July 2006. It describes the approach ECO will take to satisfy the Federal guidelines to developing the financial portion of the RTP, the methods ECO will use to complete its assigned tasks and the data it will use to complete said tasks.
- **Appendix D, Description of Typical Funding Sources,** is a table that describes all of the typical funding sources available to a given MPO, city or county transportation jurisdiction in Oregon. The table breaks the sources up by Federal, State and Local origin and then, if they are not currently utilized, evaluates their potential for implementation.
- **Appendix E, Data,** displays the origin of the data ECO uses in its analysis for the *Financial Fact Base* in greater detail.

Chapter 2 Current Funding for Transportation in the Metro Region

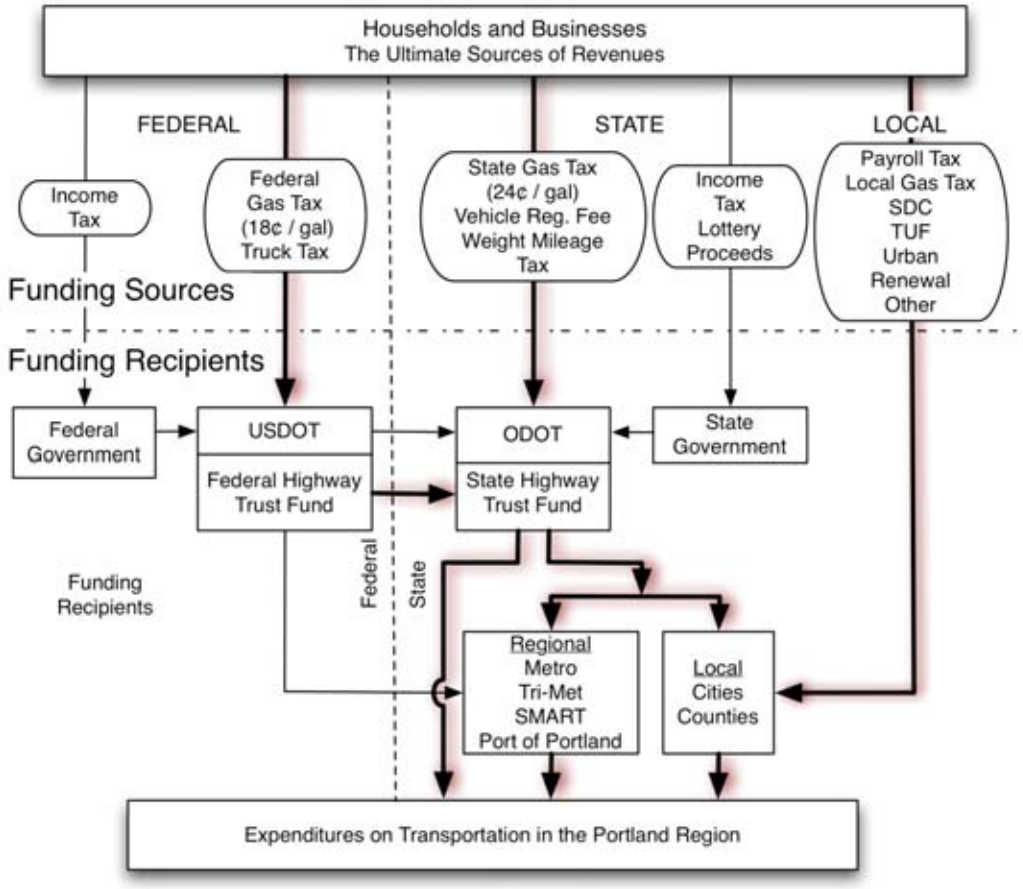
This *Financial Fact Base* focuses on compiling information that can be used to establish the level of reasonably available funding for capital projects in the Portland region through 2035. To this end, this chapter summarizes current revenues and expenditures for transportation by all levels of government in the Metro region—federal, state, and local. The information in this chapter will be used to establish a basis for understanding how the transportation system in the Metro region is financed now and the implications for future costs and revenues in the region.

OVERVIEW OF PUBLIC FUNDING FOR TRANSPORTATION

Public funding for transportation facilities and services comes from taxes and fees charged to households and businesses. Figure 2-1 shows, in broad terms, how money moves from households and businesses to federal, state, regional, and local government agencies that use it for maintaining and improving the transportation system. The highlighted lines show the main flow of funds.

At the federal level, the primary revenue source for transportation is the federal gas tax, currently 18¢ per gallon. Revenue from this tax, taxes on personal and corporate income, and other taxes and charges is pooled in the Federal Highway Trust Fund. Federal funds are allocated to ODOT for expenditures on federal and state facilities in Oregon, and for distribution to regional and local governments. The allocation of federal revenues to ODOT is determined by program formulas and earmarks established by federal legislation. These programs and earmarks dictate how this funding can be used and, in some cases, require that it be distributed to regional or local jurisdictions or for specific projects in the state.

Figure 2-1: Overview of transportation funding



Source: ECONorthwest

At the state level, the largest source of transportation revenue is also the gas tax. The state gas tax in Oregon is currently 24¢ per gallon in addition to the federal gas tax. State gas tax revenue is combined with revenue from vehicle registration fees, weight-mile taxes on trucks, taxes on personal and corporate income, property taxes, and other taxes and fees to fund transportation expenditures.

At the local level, The State Highway Trust Fund and other shared federal and state revenue from ODOT is the largest source of transportation funding for most counties and cities in Oregon. Since this shared revenue is seldom sufficient to fully fund local transportation needs, local governments have established sources for additional revenue. Some counties and cities in Oregon have enacted a local gas tax in addition to state and federal gas taxes. Other major sources of transportation revenue for local government include:

- Property taxes
- Payroll taxes for transit services
- System Development Charges (SDCs) or Transportation Impact Fees (TIFs) on new development

- Transportation Utility Fees (TUFs) on households and businesses.

Specific revenue sources for local jurisdictions in the Metro region are described in more detail later in this chapter.

The last box in Figure 2-1 represents expenditures for transportation facilities and services in the Metro region. The three arrows indicating the source of funds for these expenditures show that expenditures are made by three levels of government: state, regional, and local. Agencies at each level of government have a primary responsibility for various aspects of the region's transportation system:

- State: ODOT (federal and state roadways)
- Regional: TriMet and SMART (transit) and Metro (all parts of the transportation system)
- Local: counties, cities, and other agencies (regional and local roadways, pedestrian and bike facilities)

At each level of government, transportation revenue is from a mix of federal, state, and local sources, and transportation expenditures are for a mix of operations, maintenance, preservation and capital improvements. The following sections describe recent revenues by source and expenditures by type for the region's transportation system at each level of government.

TRANSPORTATION REVENUES AND EXPENDITURES IN THE METRO REGION

The overview and discussion of revenues and expenditures in this chapter draws from a variety of documents and data from federal, state, local, and private sources. Each document and data source reports only a subset of all transportation-related revenues and expenditures in the region. Since the state shares revenue with regional and local agencies, and agencies often cooperate on funding transportation projects, some revenues and expenditures are reported at multiple levels of government. The assessment in this chapter—and throughout this report—will seek to identify and account for any duplicate reporting of revenues or expenditures for transportation in the region.

The documents and data used in this chapter describe transportation-related revenues and expenditures over a variety of time periods, with some data for actual revenues and expenditures and some for budgeted revenues and expenditures. While having only actual or only budgeted data would be more logically consistent, data from multiple levels of government is not readily available for consistent time periods. Despite some inconsistencies in time periods, the data presented this chapter were selected to provide an adequate description of current funding conditions in the Metro region.

Using data on revenues and expenditures in various time periods raises the issue of adjusting data for inflation. The purchasing power of money changes over time from changes in the prices for goods and services. When reporting dollars from different years, economists often convert the values to adjust for changes in

prices to allow comparisons in constant dollars. This chapter, however, does not adjust data on current revenues and expenditures because:

- The data presented in this chapter are for a relatively short time period, covering the recent past and near future. Making adjustments for inflation over this short period would not substantially change the description of current funding.
- Revenues and expenditures for transportation in the Metro region fluctuate from year-to-year due to changes in revenue sources and construction activity. This chapter uses data for several years in the recent past or near future to establish an average annual level of revenue or expenditures.
- It is often difficult to tell exactly which years revenues were received or funds spent from the reports and data used in this chapter.
- Forecast of revenue levels to 2035 will be presented in nominal dollars (that is not discounted for inflation) and will, therefore, be compared to inflated costs.
- The purpose of this chapter is to provide an overall understanding of how transportation facilities and services in the Metro region are funded, and the current level of revenues and expenditures for transportation in the region. Small technical adjustments to the data are not necessary to establish a context for transportation finance in the region.

Chapter 3 will discuss the need to adjust future revenue for expected changes in costs for transportation maintenance and improvement projects over the planning period.

ODOT

The Oregon Department of Transportation (ODOT) is primarily responsible for building and maintaining federal and state transportation system in Oregon, including federal interstates, federal highways, and state highways. In addition, ODOT collects federal and state funding and allocates a portion of this funding to regional and local government agencies in Oregon. These regional and local agencies combine their share of federal and state funds with revenue from local sources to provide regional and local transportation facilities and services. The next section describes ODOT transportation revenues and expenditures at the state level; the subsequent section describes ODOT expenditures for transportation facilities in the Metro region.

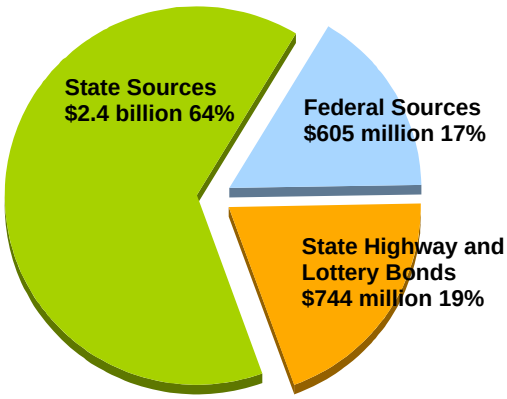
STATEWIDE OVERVIEW

Figures 2-2 and 2-3 show ODOT revenues and expenditures at the state level.

Figure 2-2. ODOT revenue by source, 2005/06–2006/07

Revenue Source	Millions	Percent
State Funds	**$2,430**	**64%**
Beginning Balance	$349	9%
Motor Fuels Taxes	$852	23%
Driver / Vehicle Licenses & Fees	$499	13%
Transportation Licenses & Fees	$63	2%
Weight-Mile Tax	$455	12%
Transfers to ODOT	$104	3%
State General Funds	$9	0%
Oregon Lottery Proceeds	$33	1%
Sales and Charges for Services	$22	1%
All Other Revenue	$44	1%
Federal Funds	**$605**	**16%**
State Highway and Oregon Lottery Revenue Bonds	**$744**	**20%**
Total ODOT Revenue	**$3,779**	**100%**

Source: ODOT *Transportation Key Facts 2006*, p. 44.



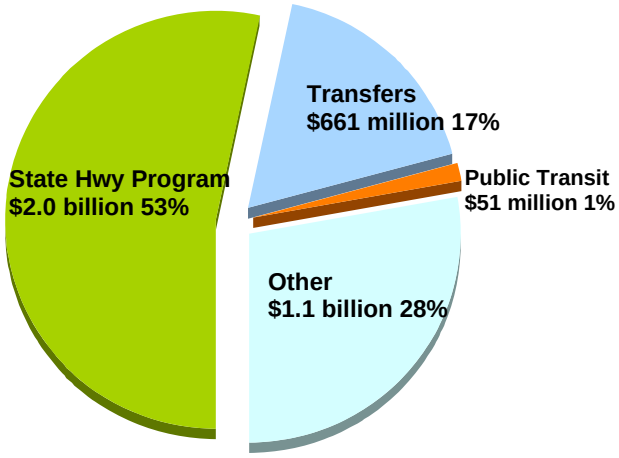
Does Revenue bonds listed above include OTIA? - Kim Ellis

Yes, I believe so; am double-checking - RD

Figure 2-3. ODOT expenditures by type, 2005/06–2006/07

Expenditure Type	Millions	Percent
State Highway Program	**$2,013**	**53%**
Bridge	$534	14%
Modernization	$454	12%
Maintenance	$299	8%
Preservation	$231	6%
Local Government Assistance	$215	6%
Other	$280	7%
Transfers to Other Agencies	**$661**	**17%**
Counties	$357	9%
Cities	$232	6%
Other Agencies	$72	2%
Debt Service	**$170**	**4%**
DMV	**$130**	**3%**
Rail	**$78**	**2%**
Public Transit	**$51**	**1%**
Other	**$280**	**7%**
Reserves and Ending Balance	**$396**	**10%**
Total ODOT Expenditures	**$3,779**	**100%**

Source: ODOT *Transportation Key Facts 2006*, p. 45.



In summary, ODOT's budget is about $3.8 billion per biennium (in rough terms, almost $2 billion per year). The revenues from the state (which are more than half [64%] of the total revenues) come primarily from the state gas tax, vehicle registration fees, and the weight-mile tax (truck transport fees). Federal funds (primarily from the Federal Highway Trust Fund, which is funded by federal gas taxes) are about 17% of the budget. About half of the budget is spent in the State Highway program, and about half of that (about $1 billion, or 25% of the total) is spent on bridges and modernization (the bulk of new construction).

Approximately, 18% is passed through to cities, counties, transit agencies and other local governments.

ODOT EXPENDITURES IN THE METRO REGION

ODOT reports expenditures by program rather than by region of the state. Thus, we do not have good data on the amount that ODOT spends on operation and maintenance of federal and state facilities in ODOT Region 1[1] or in the Metro region. We use other sources to get an estimate.

The *2006–2009 Final Statewide Transportation Improvement Plan* (STIP) is the most recent STIP adopted by ODOT. The STIP lists planned improvement projects on federal and state highways maintained by ODOT and all federal or state funded transit projects. The STIP also lists projects on local streets that have regional significance, even if these projects will be built entirely with local funds. The STIP is a four-year capital-improvements plan, not a long-range plan. In general, funding for projects listed in the STIP has been identified and the projects have a high likelihood of actually being built.

The STIP identifies projects that are within the boundaries of a Metropolitan Planning Organization (MPO), including the Portland MPO. Table 2-1 shows the total costs for ODOT projects in the Portland MPO that are listed in the 2006–2009 STIP.

Table 2-1. ODOT project costs by type in the Portland MPO, 2006–2009 (millions of dollars)

Work Type	Total Costs	Annual Average	Percent of Total
Modernization	$391.5	$97.9	34%
Transit	$342.8	$85.7	30%
Bridge	$159.8	$40.0	14%
Pavement Preservation	$114.6	$28.7	10%
Congestion Management	$53.5	$13.4	5%
Planning	$21.7	$5.4	2%
Bicycle/Pedestrian	$15.3	$3.8	1%
Safety	$11.9	$3.0	1%
Enhancement	$11.8	$2.9	1%
Operations	$10.3	$2.6	1%
Immediate Opportunity Fund	$1.2	$0.3	0%
Culvert	$1.1	$0.3	0%
Special Programs	$0.6	$0.1	0%
Total Costs	**$1,136.0**	**$284.0**	**100%**

Source: Oregon Department of Transportation. *2006–2009 Final Statewide Transportation Improvement Plan*. Costs summarized by ECONorthwest.
Note: The STIP is for four years: annual average equals *Total Costs* divided by 4.

Table 2-1 shows that the largest expenses are for modernization and transit, together making up about two-thirds of ODOT project costs in the region. Bridge

[1] ODOT Region 1 includes most of the Metro region and surrounding rural areas in Clatsop, Columbia, Washington, Clackamas, Multnomah, and Hood River County.

and pavement preservation make up the next tier of costs, together making up about a quarter of all costs.

The STIP identifies the mix of federal, state, and local revenues used to fund each improvement project, and the specific programs that are the source of federal and state revenue. Table 2-2 summarizes funding sources for Portland MPO projects included in the 2006–2009 STIP.

Table 2-2. Funding sources for ODOT, local, and transit projects in the Portland MPO, 2006–2009 (millions of dollars)

Funding Source	Total	Annual Average	Percent of Total
Federal Highway Programs	**$361.1**	**$90.3**	**32%**
Surface Transportation Program	$129.0	$32.2	11%
Federal Earmark	$67.9	$17.0	6%
Interstate Maintenance	$52.8	$13.2	5%
Congestion Management Air Quality	$48.6	$12.1	4%
National Highway System	$30.1	$7.5	3%
Highway Bridge Rehabilitation	$20.5	$5.1	2%
Transportation Enhancement	$6.7	$1.7	1%
Hazard Elimination Program	$3.5	$0.9	0%
Transportation Safety	$2.0	$0.5	0%
State Sources	**$264.1**	**$66.0**	**23%**
OTIA III	$202.5	$50.6	18%
Advance Construction	$27.9	$7.0	2%
OTIA I	$16.6	$4.2	1%
Other State Funds	$11.2	$2.8	1%
Transportation Infrastructure Bank	$3.6	$0.9	0%
Bicycle/Pedestrian Program	$1.7	$0.4	0%
Immediate Opportunity Fund	$0.5	$0.1	0%
Special Transportation Fund (transit)	$0.1	$0.0	0%
Federal Transit Programs	**$225.0**	**$56.3**	**20%**
Urbanized Area Formula (capital)	$171.0	$42.7	15%
Bus & Bus Facilities	$33.6	$8.4	3%
Bus & Bus Facilities (operating)	$20.0	$5.0	2%
Elderly & Disabled (capital)	$0.5	$0.1	0%
Local Sources	**$285.8**	**$71.4**	**25%**
Local Matching Funds	$182.2	$45.6	16%
Other Local Funding	$103.6	$25.9	9%
Total Funding	**$1,136.0**	**$284.0**	**100%**

Source: Oregon Department of Transportation. *2006–2009 Final Statewide Transportation Improvement Plan*. Funding by source summarized by ECONorthwest.

According to the STIP, funding classified as "Other" represents local funding, not federal or state funding.[2] This funding is shown as "Other Local Funding" in Table 2-2. In addition, the STIP does not report any local matching funds that are required as a condition for receiving federal or state funds.[3] Since the amount of

[2] Oregon Department of Transportation. 2005. *Final Statewide Transportation Improvement Program 2006–2009*. Appendix 1 Fund Code Descriptions, page 389.

[3] Ibid., Key to Project Listing, page 4.

funding reported for many projects in the STIP is less than the total cost of a project, this implies that the difference between total cost and reported funding is the amount of local matching funds. This assumption is reflected in the Local Matching Funds reported in Table 2-2.

Table 2-3. Funding sources for ODOT highway projects and OM&P activities in the Portland MPO, 2006–2009 (millions of dollars)

Funding Source	Improvement Projects	OM&P Activities	Total
Federal Highway Programs	**$155.0**	**$141.3**	**$296.3**
Surface Transportation Program	$41.1	$32.5	$73.5
Federal Earmark	$60.9	$2.8	$63.7
Interstate Maintenance	$1.7	$51.1	$52.8
Congestion Management Air Quality	$0.0	$43.5	$43.5
National Highway System	$18.6	$11.4	$30.1
Highway Bridge Rehabilitation	$20.5	$0.0	$20.5
Transportation Enhancement	$6.7	$0.0	$6.7
Hazard Elimination Program	$3.5	$0.0	$3.5
Transportation Safety	$2.0	$0.0	$2.0
State Sources	**$248.0**	**$14.8**	**$262.8**
OTIA III	$197.5	$5.0	$202.5
Advance Construction	$27.9	$0.0	$27.9
OTIA I	$9.5	$7.2	$16.6
Other State Funds	$9.3	$1.8	$11.2
Transportation Infrastructure Bank	$3.6	$0.0	$3.6
Bicycle/Pedestrian Program	$0.2	$0.9	$1.0
Local Sources	**$171.9**	**$22.3**	**$194.1**
Local Matching Funds	$75.7	$22.3	$97.9
Other Local Funding	$96.2	$0.0	$96.2
Total Funding	**$574.9**	**$178.4**	**$753.3**

Source: Oregon Department of Transportation. *2006–2009 Final Statewide Transportation Improvement Plan*. Funding by source summarized by ECONorthwest.
Note: Improvement Projects includes projects classified as Modernization, Bridge, Safety, and Enhancement projects in the STIP. OM&P Activities includes projects classified as Operations, Congestion Management, and Pavement Preservation projects in the STIP.

Table 2-3 shows the funding sources for ODOT highway improvement projects and OM&P activities in the Portland region, from 2006–2009. It focuses on the sources of revenue for highway projects differentiated as capital and OM&P. The note to the table explains how the estimates of funding sources tie to the costs in Table 2-1.

Table 2-4. Funding sources for ODOT transit projects in the Portland MPO, 2006–2009

Funding Source	Transit	Percent of Total
Federal Highway Programs	**$37.4**	**11%**
Surface Transportation Program	$36.5	11%
Congestion Management Air Quality	$0.9	0%
State Sources	**$0.1**	**0%**
Special Transportation Fund (transit)	$0.1	0%
Federal Transit Programs	**$225.0**	**66%**
Urbanized Area Formula (capital)	$171.0	50%
Bus & Bus Facilities	$33.6	10%
Bus & Bus Facilities (operating)	$20.0	6%
Elderly & Disabled (capital)	$0.5	0%
Local Sources	**$80.3**	**23%**
Local Matching Funds	$80.3	23%
Total Funding	**$342.8**	**100%**

Source: Oregon Department of Transportation. *2006–2009 Final Statewide Transportation Improvement Plan*. Funding by source summarized by ECONorthwest.

Table 2-4 shows the funding sources for ODOT transit projects in the Portland MPO region, 2006–2009. The majority of funding for ODOT transit-related projects in the region comes from federal sources. Total funding of $342 million ties to the costs in Table 2-1.

COUNTIES AND CITIES

Counties and cities within the region also provide funding for regional transportation projects. The following sets of tables summarize the average annual road revenues in the 3 counties in the region. A separate set of tables describe them for the cities in the region.

Table 2-5. Average annual road-related revenue by source in Clackamas, Multnomah, and Washington County, 2003–2005 (millions of dollars)

	Clackamas	Multnomah	Washington	3-County Total	3-County Percent
TOTAL REVENUE	**$46.45**	**$40.65**	**$58.43**	**$145.53**	**100%**
Receipts from Local Sources	**$21.02**	**$8.51**	**$35.81**	**$65.33**	**45%**
Non-Road Fund Transfer	$0.00	$0.00	$23.11	$23.11	16%
Special Area Assessments	$9.97	$0.00	$0.00	$9.98	7%
Fuel Tax	$0.00	$7.43	$0.81	$8.24	6%
Transportation Impact Fee (TIF) or SDC	$4.89	$0.20	$2.62	$7.71	5%
Other Gov'ts.	$1.15	$0.00	$2.10	$3.25	2%
Interest Income	$1.45	$0.28	$1.28	$3.01	2%
Property taxes within 6% Limitation	$0.00	$0.00	$2.81	$2.81	2%
From Cities	$0.00	$0.10	$2.25	$2.35	2%
Sale of Bonds and Notes	$1.67	$0.00	$0.00	$1.67	1%
Permits	$0.48	$0.00	$0.07	$0.56	0%
Transportation Utility Fees (TUF)	$0.00	$0.49	$0.00	$0.49	0%
Land Sales & Rentals	$0.20	$0.00	$0.09	$0.29	0%
Franchise Fees	$0.09	$0.00	$0.00	$0.09	0%
Other	$1.12	$0.00	$0.65	$1.78	1%
Receipts from State Government	**$19.19**	**$28.58**	**$22.62**	**$70.39**	**48%**
Highway Fund Apportionment	$16.60	$28.49	$17.24	$62.32	43%
OTIA	$2.59	$0.00	$4.72	$7.31	5%
State Forestry	$0.00	$0.00	$0.67	$0.67	0%
Exchange Program	$0.00	$0.06	$0.00	$0.06	0%
Other	$0.00	$0.03	$0.00	$0.03	0%
Receipts from Federal Government	**$6.24**	**$2.09**	**$0.00**	**$8.34**	**6%**
National Forest Reserve Revenue	$4.71	$0.61	$0.00	$5.32	4%
Traffic Grants	$0.84	$0.01	$0.00	$0.85	1%
Emergency Events	$0.00	$0.11	$0.00	$0.11	0%
Other	$0.70	$1.37	$0.00	$2.06	1%
Receipts from Other Jurisdictions	**$0.00**	**$1.01**	**$0.00**	**$1.01**	**1%**
Unspecified Other	**$0.00**	**$0.46**	**$0.00**	**$0.46**	**0%**

Source: Oregon Department of Transportation, Local Road and Street Questionnaire. Annual averages, summary, and percents calculated by ECONorthwest.

Table 2-5 shows the average annual road-related revenue by local, state, and federal sources in the three counties in the region from 2003–2005 (millions of dollars). In the region, the three counties' locally-generated funds are about on par with that received from the state.

Table 2-6. Average annual road-related expenditures by type in Clackamas, Multnomah, and Washington County, 2003–2005 (millions of dollars)

	Clackamas	Multnomah	Washington	3-County Total	3-County Percent
TOTAL EXPENDITURES	**$43.54**	**$35.54**	**$55.67**	**$134.75**	**100%**
Capital Projects	**$24.11**	**$27.66**	**$37.37**	**$89.14**	**66%**
Const. & Expansion	$15.79	$1.22	$17.40	$34.40	26%
Payments to Other Gov'ts.	$0.02	$22.71	$0.00	$22.73	17%
Const. Eng.	$3.81	$3.03	$11.72	$18.56	14%
ROW	$4.16	$0.12	$3.48	$7.76	6%
Est. Admin. & Gen. Eng.	$0.00	$0.00	$3.48	$3.48	3%
Debt Service	$0.00	$0.10	$0.88	$0.98	1%
Bike/Ped.	$0.35	$0.03	$0.41	$0.78	1%
Unspecified Other	$0.00	$0.45	$0.00	$0.45	0%
O&M Projects	**$19.43**	**$7.89**	**$18.30**	**$45.61**	**34%**
Gen. Maint.	$13.36	$4.14	$8.66	$26.16	19%
Repair & Pres.	$0.03	$0.85	$5.86	$6.75	5%
Safety & Traffic	$2.40	$1.07	$1.84	$5.31	4%
Engineering	$1.85	$1.34	$1.63	$4.81	4%
Est. Admin. & Gen. Eng.	$1.52	$0.00	$0.29	$1.81	1%
Snow/Ice Removal & Extraordinary Maint.	$0.27	$0.48	$0.02	$0.77	1%

Source: Oregon Department of Transportation, Local Road and Street Questionnaire. Annual averages, summary, and percents calculated by ECONorthwest.

Table 2-6 shows the average annual road-related expenditures in each of the three counties in the region from 2003–2005 (millions of dollars). Expenditures are differentiated as capital and OM&P projects. Of the 3-county total expenditures, about two-thirds is used on capital project, one-third on OM&P activities.

Table 2-7. Average annual road-related revenue by source in cities in the Metro region, 2003–2005 (millions of dollars)

		Suburban Cities		All Cities	
	Portland	Larger	Smaller	Total	Percent
TOTAL REVENUE	**$123.11**	**$48.29**	**$19.95**	**$191.35**	**100%**
Receipts from Local Sources	**$75.38**	**$24.59**	**$8.01**	**$107.97**	**56%**
From Counties	$21.46	$0.77	$1.01	$23.25	12%
Non-Road Fund Transfer	$12.98	$3.28	$1.11	$17.37	9%
Transportation Impact Fee (TIF) or SDC	$3.33	$8.54	$3.26	$15.13	8%
Parking	$13.41	$0.00	$0.00	$13.41	7%
Other Gov'ts.	$6.72	$0.28	$0.22	$7.22	4%
Sale of Bonds and Notes	$3.33	$2.00	$0.04	$5.37	3%
Permits	$2.98	$0.00	$0.05	$3.03	2%
Special Area Assessments	$0.61	$1.97	$0.10	$2.68	1%
Interest Income	$0.28	$1.66	$0.33	$2.26	1%
Property taxes within 6% Limitation	$0.00	$1.67	$0.00	$1.67	1%
Transportation Utility Fees (TUF)	$0.00	$1.01	$0.64	$1.66	1%
Franchise Fees	$0.00	$0.67	$0.46	$1.13	1%
Fuel Tax	$0.00	$0.53	$0.14	$0.67	0%
Other	$10.29	$2.19	$0.64	$13.13	7%
Receipts from State Government	**$28.29**	**$16.83**	**$10.93**	**$56.04**	**29%**
Highway Fund Apportionment	$24.28	$15.59	$7.82	$47.69	25%
OTIA	$0.00	$0.00	$1.13	$1.13	1%
Exchange Program	$0.00	$0.04	$0.00	$0.04	0%
Other	$4.01	$1.20	$1.98	$7.19	4%
Receipts from Federal Government	**$4.31**	**$0.94**	**$0.42**	**$5.67**	**3%**
Traffic Grants	$0.00	$0.91	$0.39	$1.30	1%
Emergency Events	$0.40	$0.00	$0.00	$0.40	0%
Housing and Urban Development	$0.00	$0.02	$0.04	$0.06	0%
Other	$3.91	$0.00	$0.00	$3.91	2%
Receipts from Private Sources	**$0.14**	**$5.87**	**$0.00**	**$6.01**	**3%**
Receipts from Other Jurisdictions	**$14.99**	**$0.07**	**$0.60**	**$15.65**	**8%**

Source: Oregon Department of Transportation, Local Road and Street Questionnaire. Annual averages, summary, and percents calculated by ECONorthwest.
Note: Larger suburban cities are Beaverton, Hillsboro, Tigard, Gresham, Lake Oswego, and Wilsonville. Smaller suburban cities are Cornelius, Forest Grove, Sherwood, Tualatin, Troutdale, Fairview, Oregon City, Gladstone, West Linn, Wood Village, Milwaukie, Damascus, and Happy Valley.

Should STP/CMAQ/TE funds be listed under receipts from federal government?? – Kim Ellis

Table 2-7 shows the average annual road-related revenue in cities within the Metro region, 2003–2005 (millions of dollars). The table shows figures for the main city in the region, Portland, and combined totals for larger and smaller cities in the region. The data shows that local sources make up a little more than half of combined city revenues. About a third comes from the state, and a small percentage comes directly from federal sources.

Table 2-8. Average annual road-related expenditures by type in cities in the Metro region, 2003–2005 (millions of dollars)

		Suburban Cities		All Cities	
	Portland	Larger	Smaller	Total	Percent
TOTAL EXPENDITURES	**$122.95**	**$44.79**	**$19.23**	**$186.98**	**100%**
Capital Projects	**$52.65**	**$22.70**	**$9.11**	**$84.45**	**45%**
Const. & Expansion	$9.47	$13.46	$5.39	$28.31	15%
ROW	$15.33	$0.60	$0.63	$16.55	9%
Debt Service	$6.77	$5.61	$0.33	$12.71	7%
Non-road and street work	$9.81	$0.00	$0.05	$9.86	5%
Work for other jurisdictions	$8.74	$0.00	$0.00	$8.74	5%
Const. Eng.	$1.03	$2.19	$2.26	$5.49	3%
Payments to Other Gov'ts.	$1.48	$0.71	$0.32	$2.51	1%
Bike/Ped.	$0.03	$0.12	$0.12	$0.27	0%
Est. Admin. & Gen. Eng.	$0.00	$0.00	$0.01	$0.01	0%
O&M Projects	**$69.89**	**$19.69**	**$9.87**	**$99.45**	**53%**
Gen. Maint.	$44.66	$6.70	$3.68	$55.04	29%
Est. Admin. & Gen. Eng.	$15.98	$5.53	$3.19	$24.70	13%
Safety & Traffic	$7.90	$3.30	$0.96	$12.15	6%
Repair & Pres.	$1.24	$3.60	$1.53	$6.37	3%
Engineering	$0.00	$0.54	$0.49	$1.03	1%
Snow/Ice Removal & Extraordinary Maint.	$0.13	$0.02	$0.02	$0.17	0%
Unallocated Admin. & Gen. Eng.	**$0.00**	**$2.40**	**$0.26**	**$2.66**	**1%**
Federal Emergency Events	**$0.41**	**$0.00**	**$0.00**	**$0.41**	**0%**

Source: Oregon Department of Transportation, Local Road and Street Questionnaire. Annual averages, summary, and percents calculated by ECONorthwest.
Note: Larger suburban cities are Beaverton, Hillsboro, Tigard, Gresham, Lake Oswego, and Wilsonville. Smaller suburban cities are Cornelius, Forest Grove, Sherwood, Tualatin, Troutdale, Fairview, Oregon City, Gladstone, West Linn, Wood Village, Milwaukie, Damascus, and Happy Valley.

Table 2-8 shows the average annual road-related combined expenditures of the cities in the region from 2003–2005 (millions of dollars). Expenditures are differentiated as capital and OM&P projects. Cities in the region expend more than half of their available funding on OM&P activities.

Table 2-9. Average annual road-related revenue and expenditures in counties and cities in the Metro region, 2003–2005 (millions of dollars)

			Metro Region	
	Counties	Cities	Total	Percent
TOTAL REVENUE	**$145.53**	**$191.35**	**$336.88**	**100%**
Local Sources	$65.33	$107.97	$173.30	51%
State Government	$70.39	$56.04	$126.43	38%
Federal Government	$8.34	$5.67	$14.01	4%
Private Sources	$0.00	$6.01	$6.01	2%
Other Jurisdictions	$1.01	$15.65	$16.66	5%
Unspecified Other	$0.46	$0.00	$0.46	0%
TOTAL EXPENDITURES	**$134.75**	**$186.98**	**$321.73**	**100%**
Capital Projects	$89.14	$84.45	$173.59	54%
O&M Projects	$45.61	$99.45	$145.07	45%
Unallocated Admin. & Gen. Eng.	$0.00	$2.66	$2.66	1%
Federal Emergency Events	$0.00	$0.41	$0.41	0%

Source: Oregon Department of Transportation, Local Road and Street Questionnaire. Annual averages, summary, and percents calculated by ECONorthwest.

Based on the data described in the previous tables, table 2-9 summarizes the average annual road-related revenue and expenditures in the counties and cities combined in the Metro region between 2003–2005. It is no surprise that local and

state sources provide nearly all of the funding generated at the local level. The combined expenditures shows that counties and cities expend more on capital projects (54% of all expenditures) than on OM&P activities (45%).

OTHER ROADWAY FUNDS

The Port of Portland indirectly contributes to the improvement of the regional transportation system. The Port expends approximate $5 million per year through their general fund on projects of regional significance. Over time these projects are often turned over to the City of Portland.

TRIMET

TriMet is the primary provider of transit service in the Metro region. Table 2-10 shows revenues and expenditures in TriMet's General Fund for FY2001–FY2005. Table 2-10 shows that TriMet had total revenues of almost $310 million in FY2005. The Employer/Municipal Payroll Tax generated roughly 50% of TriMet's annual revenue in the five years shown in Table 2-10. Passenger Revenue generated about 20% of annual revenue, and Grants and Capital Reimbursements generated about 15% to 20%. Remaining revenue sources contributed only 10% to 15% of TriMet's total revenue over the period shown in Table 2-10.

Table 2-10. General Fund revenue and expenditures for TriMet, 2004–2007 (thousands of dollars)

	FY2001	FY2002	FY2003	FY2004	FY2005
Beginning Working Capital	**$70,170**	**$86,900**	**$70,300**	**$51,994**	**$37,100**
Total Revenues	**$278,283**	**$273,391**	**$270,252**	**$285,713**	**$309,332**
Employer/Municipal Payroll Tax	$151,578	$146,228	$145,231	$146,125	$155,317
Passenger Revenue	$51,702	$53,191	$52,746	$55,664	$59,487
Grants & Capital Reimbursement	$39,020	$40,863	$39,885	$51,635	$58,350
Other Operating Revenue	$15,433	$17,217	$18,268	$17,482	$16,204
Self Employed Tax	$6,558	$7,289	$6,801	$7,541	$7,906
ATP-Cigarette Tax, Agency, Fares	$3,925	$3,510	$3,380	$3,775	$7,722
Interest	$8,392	$3,152	$2,072	$1,622	$2,375
State In-Lieu	$1,675	$1,941	$1,869	$1,869	$1,971
Total Expenditures	**$251,210**	**$280,121**	**$288,557**	**$298,397**	**$331,441**
Bus Operations	$116,421	$117,981	$127,177	$133,968	$148,859
Rail Operations (incl. Ptld. Streetcar)	$35,293	$37,887	$41,362	$44,263	$50,441
General & Administration	$37,744	$49,372	$39,821	$38,289	$39,426
Accessible Transportation Programs	$24,481	$27,900	$30,023	$31,914	$35,452
Capital Projects & Facilities	$9,937	$12,280	$10,601	$18,830	$19,676
Debt Service	$9,417	$10,479	$9,357	$10,389	$15,239
Transfer to Capital Fund-Projects	$17,917	$14,678	$20,349	$10,554	$11,331
Field Services		$9,544	$9,868	$10,190	$11,018
Ending Balance	**$97,243**	**$80,170**	**$51,994**	**$39,309**	**$14,991**

Source: TriMet. *FY 2006 Financial Issues Report #1: Financial Analysis and Forecast*. Fall 2005. Table 1.

Roughly 60% of TriMet's expenditures are for bus and rail operations (45% for bus and 15% for rail). Expenditures for Capital Projects and Facilities, and Transfers to Capital Fund, have averaged about 10% of TriMet's expenditures over the five years shown in Table 2-10, just over $30,000 in FY 2005.

Table 2-11. Capital Fund revenue and expenditures for TriMet, 2004–2007 (thousands of dollars)

	FY2001	FY2002	FY2003	FY2004	FY2005
Total Capital Revenues	**$49,997**	**$41,273**	**$37,004**	**$17,757**	**$20,181**
Vehicle Replacement Reserve	$11,847	$20,539	$3,248	$0	$0
Bond Proceeds/Debt Financing	$2,500	$0	$0	$0	$1,728
Transfer from General Fund	$17,917	$14,678	$20,349	$10,554	$11,331
Federal Grant Resources	$17,733	$6,056	$13,408	$7,203	$7,123
Total Capital Expenditures	**$38,150**	**$20,734**	**$33,757**	**$17,757**	**$20,181**
Replacement	$28,294	$5,042	$23,270	$10,007	$1,391
Improvement	$9,856	$15,692	$10,487	$7,750	$18,790
Costs by Funding Source					
Eligible for Federal Funds	$17,733	$6,056	$13,408	$7,203	$7,123
Tri-Met Funds Required	$20,417	$14,678	$20,349	$10,554	$13,059
Fund Balances					
Federal Grant Fund Balance	$0	$0	$0	$0	$0
Tri-Met Capital Fund Balance	$11,847	$20,539	$3,248	$0	$0

Source: TriMet. *FY 2006 Financial Issues Report #1: Financial Analysis and Forecast*. Fall 2005. Table 1.

Table 2-11 shows revenues and expenditures in TriMet's Capital Fund over the same period. TriMet spent an average of $26.1 million per year on capital projects over the five years shown in Table 2-11, with roughly half for replacement of equipment and half for improvement of facilities. Federal grants covered an average of roughly 40% of TriMet's capital costs over this period, with the remaining 60% of funding from TriMet sources.

Expand on light rail transit – do or don't these tables include LRT funding?

SMART

The South Metro Area Rapid Transit (SMART) primarily serves transit riders in Wilsonville, Oregon. ECO's study of the recent DRAFT Wilsonville Transit Master Plan shows that the transit provider projects expenses to be just under $3 million in FY2007. According to the Wilsonville Transit Master Plan, anticipated 2007 revenues are expected to be just over $3 million, slightly exceeding the amount of the transit service's costs.

Chapter 3 Future Transportation Revenues in the Metro Region

This chapter forecasts revenues that will be available to jurisdictions for operation and improvement of the transportation system in the Metro region over the planning horizon of the RTP. The next section describes methods and assumptions used to forecast future revenue. The remainder of the chapter uses data and assumptions to forecast levels of specific funding elements, organized into two sections: roads and transit services. Each of these sections ends with a summary forecast for each funding element to describe overall funding conditions for roads and transit service in the region.

METHODS AND ASSUMPTIONS FOR ESTIMATING REVENUE

FEDERAL REGULATIONS AND GUIDANCE FOR TRANSPORTATION PLANNING

The federal government requires metropolitan regions to develop and update a long-range transportation plan for the region. These plans must identify transportation demand for people and goods in the region, assess measures to preserve and make the most efficient use of the existing transportation system, and identify improvements needed to the existing system to meet future demand.[1] The Regional Transportation Plan (RTP) being developed by Metro is the required long-range plan for the metropolitan Portland region.

A key purpose of long-range transportation plans is to set priorities for allocating limited resources for operating, preserving, and improving the transportation system in a region. To ensure that long-term transportation plans are realistic and set meaningful priorities, federal regulations limit the total cost of operation, preservation, and improvement activities in the plan to the level of reasonably available revenue in the region. This requirement is referred to as "fiscal constraint" and transportation plans are said to be "fiscally constrained." Federal regulations specific to long-range metropolitan transportation plans require those plans to

> "Include a financial plan that demonstrates the consistency of proposed transportation investments with already available and projected sources of revenue. The financial plan shall compare the estimated revenue from existing and proposed funding sources that can reasonably be expected to be available for transportation uses, and the estimated costs of constructing, maintaining and operating the total (existing plus planned) transportation system over the period of the plan. The estimated revenue

[1] 23 CFR 450.322

> by existing revenue source (local, State, and Federal and private) available for transportation projects shall be determined and any shortfalls identified. Proposed new revenues and/or revenue sources to cover shortfalls shall be identified, including strategies for ensuring their availability for proposed investments. Existing and proposed revenues shall cover all forecasted capital, operating, and maintenance costs. All cost and revenue projections shall be based on the data reflecting the existing situation and historical trends" [2]

The practical implication of federal regulations and guidance on fiscal constraint is that long-range transportation plans must estimate the level of revenue that is "reasonably expected to be available" in the region. Federal regulations do not specifically define the meaning of "reasonable," but guidance on fiscal constraint from the FHWA defines "reasonableness" as

> "being in accordance with good judgment, sound sense, fairness, duty, or prudence."[3]

Federal regulations recognize the difficulty in projecting revenues and costs, so they provide for flexibility in demonstrating fiscal constraint:[4]

- Future revenues may be based on historical trends, including assumptions about future policy decisions based on past legislative or executive policy actions that affected revenue.
- Revenue forecasts can include new funding sources that do not currently exist or that may require additional steps before the revenue can be committed to transportation costs. These new funding sources must be "reasonably expected to be available" and the plan must include a strategy that identifies steps needed to ensure that the funding will become available within the time frame of the plan.
- While the fiscal constraint requires regions to provide for maintenance of the existing transportation system, FHWA and FTA largely defer to state and local governments regarding the appropriate level of operation and maintenance expenditures. The level of future funding allocated to operation, maintenance, and preservation of the existing transportation system affects the amount remaining for improvements to the system.

In this context, it appears that there are a variety of reasonable assumptions that one can make about future conditions that will result in a range of reasonably available revenue for transportation needs in a region. The analysis in this chapter groups all of the potential assumptions for various funding sources into three sets of assumptions to establish a range of "reasonably available" revenue:

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[2] 23 CFR 450.322(b)(11)

[3] U.S. Department of Transportation, Federal Highway Administration. *Fiscal Constraint Definitions.* Last updated July 6, 2005. http://www.fhwa.dot.gov/Planning/fcdef62805.htm

[4] U.S. Department of Transportation, Federal Highway Administration. *FHWA-FTA Fiscal Constraint Guidance*. June 27, 2005. http://www.fhwa.dot.gov/Planning/fcguid62705.htm

- **Existing sources (E)** represents the level of revenue available from existing sources with no increases in tax rates or fees. (This funding level precludes the 1-cent per year gas tax increase.) Changes in revenue from existing sources occur only from changes in underlying conditions, such as property values, number of vehicles, or volume of gasoline sales.
- **Existing plus conservative expansion (E+)** includes revenue from existing sources, committed revenues, and reasonable but conservative assumptions for increases in revenue. The majority of increase from existing revenue is primarily through 1-cent per year gas tax increase and increases in federal High Priority Project Program (HPPP) funding based on increase in regional population.
- **Existing plus optimistic expansion (E++)** includes revenue from existing sources based on reasonable but optimistic assumptions for increases in tax rates, fees, and other policy decisions that affect revenue, including gas tax increases plus periodic increases in vehicle registration fees and an increased share of STIP funds.

The primary source of assumptions for future levels of revenue from federal and state sources in the Metro region is ODOT's *Financial Assumptions for the Development of Metropolitan Transportation Plans 2005–2030* [ODOT's *Financial Assumptions*].[5] Additional assumptions are made to forecast future levels of revenue from local funding sources. The methods and assumptions used to forecast revenue from each funding source are identified in the remainder of this chapter.

DISCOUNTING FUTURE REVENUE TO CONSTANT DOLLARS

Comparing and understanding revenues that are generated today (current or constant dollars) to revenues generated in the future is complex and often confusing. The complexity and confusion typically arises from the concept that a dollar today is not equivalent to a dollar in future years. For example, the same annual $200 million for transportation improvements (in constant [2007] dollars) erodes to about $85 million (in constant dollars) by 2035. So that we avoid overestimating potential future funds, future revenue (and costs) are discounted to constant 2007 dollars.

FUNDING FOR ROADS IN THE METRO REGION

This section forecasts revenue available to jurisdictions in the Metro region from federal, state, and local funding sources over the planning horizon for the RTP, 2007 to 2035. This section begins with a forecast of funding available to ODOT for modernization projects in the Metro region, followed by forecasts of total revenue available to local jurisdictions in the Metro region from federal, state, and local sources.

[5] ODOT Financial Services, Policy and Economic Analysis Unit. December 2004 (tables updated March 2006).

Many of the tables in this chapter have been abridged. Some sections, where ECO believed appropriate, contain analysis without the aid of tables. Raw data and complete forecasts, the basis of the tables in this chapter, can be found in Appendix E.

ODOT EXPENDITURES FOR FEDERAL AND STATE HIGHWAYS IN THE METRO REGION

ODOT is responsible for operation, maintenance, and preservation (OM&P) of the federal and state highway system in the Metro region. The level of expenditures needed for OM&P affects the amount of funding available for modernization projects to expand the capacity of the transportation system. To estimate the level of funding available for modernization projects, ODOT's *Financial Assumptions* includes an assumption about the level of future expenditures needed for OM&P of the existing federal and state system.[6] The forecasts in ODOT's Financial Assumptions subtracts funding needed for future OM&P expenditures from total revenues in order to estimate the level of funding available for modernization projects.

This assessment of future expenditures needed for OM&P is done for the state as a whole—ODOT's *Financial Assumptions* does not include a forecast of funding or expenditures by ODOT for OM&P activities in the Metro region. For the purposes of developing a financial plan for the RTP, Metro can assume that ODOT will continue to be responsible for funding OM&P of the federal and state highway system in the region, and that ODOT has allocated sufficient funding for this in its estimates of funding allocated to local jurisdictions and of funding available for expenditures by ODOT on modernization projects in the region.

ODOT's *Financial Assumptions* does include a forecast of future funding available to ODOT for modernization of the federal and state highway system. This forecast includes revenue from the State Highway Trust Fund (which is composed of revenue from the state gas tax, vehicle registration fees, and other road-related taxes and fees) and federal funding programs including the High Priority Projects Program (HPPP), Congestion Mitigation and Air Quality (CMAQ), Surface Transportation Program (STP), Highway Bridge Rehabilitation and Repair (HBRR), Safety, Demonstrations, and Borders and Corridors.

For the next several years, ODOT expects OM&P needs to be greater than available funds, even with a gradual gas tax increase. While this would lead to no ODOT funding for modernization if all OM&P needs were met, ORS 366.507 requires a minimum amount of spending by ODOT on modernization. In addition, revenue from bonds issued as part of the Oregon Transportation Investment Act (OTIA) will boost funding available for modernization projects through 2012.

[6] ODOT based future OM&P needs on Scenario 3 of the 1999 Oregon Highway Plan with minor adjustments. That scenario calls for maintaining pavement condition at a level where 78% of pavement is considered to be in fair or better condition. (ODOT *Financial Assumptions*, p. 9)

Distribution of modernization funds to metropolitan areas is determined by deliberation among ODOT, local governments, Metropolitan Planning Organizations (MPOs), and the Oregon Transportation Commission (OTC). Analysis of historical expenditures of modernization funds shows that the Metro region has received about 30% of this funding.

Table 3-1 shows ODOT's forecast of funding available for modernization projects in metropolitan areas statewide, and share of those expenditures in the Metro region assuming it continues to receive 30% of statewide expenditures over the forecast period.

Table 3-1. Funding available to ODOT for expenditures on modernization projects in Oregon and the Metro region, 2007–2035 (millions of 2007$)

Year	Statewide Funding	Metro region's share of funding
2007	$93.4	$22.4
2008	$73.5	$17.7
2009	$71.2	$17.1
2010	$69.8	$16.7
2011	$68.4	$16.4
2012	$67.1	$16.1
2013	$24.3	$5.8
2014	$24.3	$5.8
2015	$24.3	$5.8
2016	$24.4	$5.9
2017	$24.4	$5.9
2018	$24.5	$5.9
2019	$24.5	$5.9
2020	$24.5	$5.9
2021	$24.6	$5.9
2022	$24.6	$5.9
2023	$24.6	$5.9
2024	$24.7	$5.9
2025	$24.7	$5.9
2026	$24.8	$5.9
2027	$24.8	$6.0
2028	$24.8	$6.0
2029	$24.9	$6.0
2030	$24.9	$6.0
2031	$25.0	$6.0
2032	$25.0	$6.0
2033	$25.0	$6.0
2034	$25.1	$6.0
2035	$25.1	$6.0
Total	**$1,011.2**	**$242.7**
Ann Avg	**$34.9**	**$8.4**

Year	Statewide Funding	Metro Share	Metro Funding
2007	$130.9	24%	$31.4
2008	$110.6	24%	$26.5
2009	$107.8	24%	$25.9
2010	$94.5	24%	$22.7
2011	$93.1	24%	$22.4
2012	$94.5	24%	$22.7
2013	$51.5	24%	$12.4
2014	$51.4	24%	$12.3
2015	$51.2	24%	$12.3
2016	$51.1	24%	$12.3
2017	$50.9	24%	$12.2
2018	$50.8	24%	$12.2
2019	$50.6	24%	$12.2
2020	$50.5	24%	$12.1
2021	$50.3	24%	$12.1
2022	$50.2	24%	$12.0
2023	$50.0	24%	$12.0
2024	$49.8	24%	$12.0
2025	$49.7	24%	$11.9
2026	$49.5	24%	$11.9
2027	$56.1	24%	$13.5
2028	$55.8	24%	$13.4
2029	$55.4	24%	$13.3
2030	$61.2	24%	$14.7
2031	$60.7	24%	$14.6
2032	$60.1	24%	$14.4
2033	$59.5	24%	$14.3
2034	$59.0	24%	$14.2
2035	$58.4	24%	$14.0
Total	**$1,865.0**		**$447.6**
Ann Avg	**$64.3**		**$15.4**

Source: ODOT's *Financial Assumptions*, "Derivation of Funds Available to Finance State Highway Modernization With New OM&P Revenue." Updated March 2006. Conversion to 2007 dollars and allocation to Metro region by ECONorthwest.

Table 3-1 reflects available statewide ODOT funds after subtracting out "ORS 366.507 Funds Net of Debt Service" (to avoid double-counting). The share historically distributed to the Metro region is about 30% of the available funds.

ODOT expects its funding for modernization to drop from roughly $67 million in 2012 to $24 million in 2013 as revenue from OTIA bonds is used up for specific projects. After 2013, ODOT expects its modernization funds to grow at about the same rate as inflation, resulting in relatively stable annual levels of funding in constant dollars.

ECO assumes that the Metro region will a constant percentage of ODOT's expenditures on modernization projects, thus funding for projects in the region will follow the same pattern of available state funding. Thus, modernization projects in the Metro region drop from $16 million in 2012 to about $6 million in 2013, in line with state funding, as revenue from statewide bond revenues reserved for highway modernization are spent. ECO estimates the Metro region

receiving an average of $8.4 million (2007$) per year from 2007–2035. (This includes OTIA and subsequent bond revenue through 2012.) Annual funding for ODOT modernization projects in the Metro region is expected to be relatively stable after 2013, averaging roughly $6 million (2007$) per year though 2035. Over the entire planning period, ODOT data projects the Metro region receiving about $240 million (in 2007$) for modernization projects.

The forecast of funding available for modernization projects from ODOT's Financial Assumptions is based on a forecast of State Highway Trust Fund revenues that assumes the state gas tax will increase by the equivalent of 1 cent per year every year beginning in July 2005. In fact, the state gas tax did not increase in 2005 or 2006. If the state gas tax is not increased, some of the funds otherwise available to ODOT for modernization will need to be diverted to fund OM&P expenditures, reducing the level of funding available to ODOT for modernization projects.

FUNDING FOR LOCAL JURISDICTIONS IN THE METRO REGION

ODOT's Financial Assumptions includes forecasts of the amount of revenue from federal and state sources that will be available to all jurisdictions in the Metro region. This section summarizes ODOT forecasts of federal and state revenue available to jurisdictions in the Metro region. In addition to federal and state sources, jurisdictions in the Metro region have local funding sources for transportation.

FEDERAL FUNDING IN THE METRO REGION

The federal government provides funding through a variety of programs administered by the Federal Highway Administration (FHWA). Federal transportation funding programs are established by legislation that set funding levels and policies for the distribution of funds. The most recent federal legislation authorizing transportation funding is the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU). This section summarizes forecasts from ODOT's *Financial Assumptions* for federal funding available to jurisdictions in the Metro region. Most of the federal formula categories available to ODOT for state facilities are part of the analysis provided earlier in this chapter.

Federal High Priority Project Program funds

The federal High Priority Project Program (HPPP) is a discretionary program for capital projects. HPPP and other discretionary federal funds are earmarked to specific projects by Congress based on need. ODOT's *Financial Assumptions* includes a forecast of HPPP and other federal discretionary funding available to Oregon; this forecast assumes that annual HPPP revenue will remain relatively flat over the forecast period because it is expected to increase only at the rate of inflation after 2010. ODOT provides three alternative forecasts for the share of HPPP funding available to jurisdiction in the Metro region, based on:

- the level of HPPP and other federal discretionary funds allocated to the Metro region under the last three federal authorizations (ISTEA, TEA-21, and SAFETEA)
- the level of HPPP and other federal discretionary funds allocated to the Metro region over the under the current federal authorization (SAFETEA-LU), and
- the region's share of Oregon's population.

Table 3-2 shows the resulting forecast of HPPP and other discretionary federal revenues allocated to the Metro region between 2007 and 2035. Table 3-2 shows that the Metro region would receive a total of $315–$670 million in funding from HPPP and other federal discretionary funding programs over the planning period for the RTP (in constant 2007 dollars).

Table 3-2. HPPP and other discretionary federal revenues allocated to the Metro region, 2007–2035 (millions of 2007$)

	Allocation to Metro Region		
Year	Based on ISTEA, TEA-21, & SAFETEA	Based on SAFETEA-LU	Based on Population
2007	$11.3	$24.0	$21.1
2008	$10.9	$23.3	$20.4
2009	$10.6	$22.6	$19.8
2010	$10.6	$22.7	$19.9
2011	$10.6	$22.7	$19.9
2012	$10.7	$22.7	$19.9
2013	$10.7	$22.8	$20.0
2014	$10.7	$22.8	$20.0
2015	$10.7	$22.8	$20.0
2016	$10.7	$22.9	$20.1
2017	$10.7	$22.9	$20.1
2018	$10.8	$22.9	$20.1
2019	$10.8	$23.0	$20.1
2020	$10.8	$23.0	$20.2
2021	$10.8	$23.0	$20.2
2022	$10.8	$23.1	$20.2
2023	$10.8	$23.1	$20.3
2024	$10.9	$23.2	$20.3
2025	$10.9	$23.2	$20.3
2026	$10.9	$23.2	$20.4
2027	$10.9	$23.3	$20.4
2028	$10.9	$23.3	$20.4
2029	$10.9	$23.3	$20.5
2030	$11.0	$23.4	$20.5
2031	$11.0	$23.4	$20.5
2032	$11.0	$23.4	$20.6
2033	$11.0	$23.5	$20.6
2034	$11.0	$23.5	$20.6
2035	$11.0	$23.6	$20.7
Total	**$314.5**	**$670.7**	**$588.0**
Ann Avg	**$10.8**	**$23.1**	**$20.3**

Source: ODOT's *Financial Assumptions*, "Projected Average HPPP and Discretionary Highway Amounts." Updated January 2006. Conversion to 2007 dollars by ECONorthwest.

The three alternative ODOT forecasts of HPPP and other discretionary federal funding allocated to the Metro region can be used to place a lower and upper bounds on potential revenue from these sources. The forecasts in Table 3-2 correspond to three sets of assumptions we are using to forecast reasonably available revenue in this chapter as follows:

- **Existing sources (E):** $314.5 million
- **Existing sources plus conservative expansion (E+):** $588.0 million
- **Existing sources plus optimistic expansion (E++):** $670.7 million.

ODOT also uses HPPP and other federal discretionary funds directly for expenditures on state highways. The amount of this funding available to ODOT is included in the estimate of ODOT funding for modernization projects in the

Metro region earlier in this chapter, and there must be, therefore, a split between ODOT and local facilities. Historically, this split has been 50/50.

Federal Surface Transportation Program (STP) allocation to TMAs, counties and cities

ODOT's *Financial Assumptions* document includes an estimate of the STP apportionment to the Portland Transportation Management Area (TMA), which corresponds to the Metro region. ODOT also forecasts STP allocations to Multnomah, Clackamas, and Washington County for funding transportation in the non-metropolitan portions of those counties. This STP funding is not included in this section because it is for areas that are outside of the Metro region. Table 3-3 shows the annual STP allocation to the Portland TMA between 2007 and 2035 from ODOT's *Financial Assumptions.*

Table 3-3. STP allocation to the Portland TMA, 2007–2035 (millions of 2007$)

Year	STP Funds to Portland TMA
2007	$17.5
2008	$16.6
2009	$16.3
2010	$16.3
2011	$16.3
2012	$16.4
2013	$16.4
2014	$16.4
2015	$16.4
2016	$16.5
2017	$16.5
2018	$16.5
2019	$16.5
2020	$16.6
2021	$16.6
2022	$16.6
2023	$16.6
2024	$16.7
2025	$16.7
2026	$16.7
2027	$16.7
2028	$16.8
2029	$16.8
2030	$16.8
2031	$16.8
2032	$16.9
2033	$16.9
2034	$16.9
2035	$17.0
Total	**$482.7**
Ann Avg	**$16.6**

Source: ODOT's *Financial Assumptions*, "Distribution of Federal Highway Funds (STP

Only)." Updated in 2006. Conversion to 2007 dollars by ECONorthwest.

Because the STP allocation is expected to increase only slightly faster than the assumed rate of inflation, the Portland TMA is expected to receive a fairly level annual allocation of STP funding, averaging $16.6 million per year between 2007 to 2035 (in constant 2007 dollars). This funding will total $482.7 million over the forecast period for the RTP.

The forecasts in ODOT's *Financial Assumptions* show the same annual increase in STP funding all TMAs and counties, regardless of expected population growth. It is possible that the Metro area's STP funding might increase more than these ODOT assumptions suggest, if it continues growing faster than the rest of the state and therefore increases its population-based share of STP funding. Oregon's Office of Economic Analysis (OEA) projects the tri-county region's population to increase 46% from 2005 to 2035, slightly higher than the 43% increase expected for the entire state. This suggests no significant adjustment to the Metro region's share of STP funds.

Other federal highway funds to the region

ODOT's *Financial Assumptions* document estimates the amount of federal highway funds other than STP and HPPP that will be available through 2035. These federal sources include the following programs (from largest to smallest):

- Highway Bridge Rehabilitation and Repair (HBRR)
- Congestion Mitigation and Air Quality (CMAQ), which ODOT passes through to Metro by formula for distribution to various jurisdictions within the Metro region.
- ~~Transportation and Growth Management (TGM)~~
- Transportation Enhancements (typically 10% of the STP allocation)
- ~~Metropolitan planning~~
- Miscellaneous smaller programs

The forecast of total funding from these sources in ODOT's *Financial Assumptions* are for the state only, without a breakdown of funding by region. The forecast of funding is based on the assumption that these sources will all increase at roughly the level of inflation (3.26%) from 2010 to 2035. In constant 2007 dollars, therefore, the amount of federal funding to Oregon from these sources is expected to remain relatively constant from 2007 to 2035 at roughly $50 million per year.

As the largest metropolitan region in the state, the Metro MPO has historically received a large share of the total funding available from these sources. Currently, Metro receives 80% of all state CMAQ funds. Examination of recent STIPs shows that Metro receives about 70% of the local share of the state's Highway Bridge funds, and about 25% of the state's Transportation Enhancements funds. All combined, these sources account for 63% of the total

statewide funding available from other sources. The STIP does not report distribution of all funding from other sources identified in this section.

Table 3-4. Funding from other federal sources, 2007–2035 (millions of 2007$)

		Allocation to Metro MPO			
		Based on share of		Based on share in	
Year	Statewide		SHF		recent STIPs
2007	$49.8	45%	$22.4	63%	$31.2
2008	$49.7	45%	$22.4	63%	$31.4
2009	$49.1	45%	$22.1	63%	$31.0
2010	$49.2	45%	$22.1	63%	$31.0
2011	$49.2	45%	$22.2	63%	$31.1
2012	$49.3	45%	$22.2	63%	$31.1
2013	$49.4	45%	$22.2	63%	$31.2
2014	$49.5	45%	$22.3	63%	$31.2
2015	$49.5	45%	$22.3	63%	$31.2
2016	$49.6	45%	$22.3	63%	$31.3
2017	$49.7	45%	$22.4	63%	$31.3
2018	$49.8	45%	$22.4	63%	$31.4
2019	$49.8	45%	$22.4	63%	$31.4
2020	$49.9	45%	$22.5	63%	$31.5
2021	$50.0	45%	$22.5	63%	$31.5
2022	$50.1	45%	$22.5	63%	$31.6
2023	$50.2	45%	$22.6	63%	$31.6
2024	$50.2	45%	$22.6	63%	$31.7
2025	$50.3	45%	$22.6	63%	$31.7
2026	$50.4	45%	$22.7	63%	$31.8
2027	$50.5	45%	$22.7	63%	$31.8
2028	$50.5	45%	$22.7	63%	$31.9
2029	$50.6	45%	$22.8	63%	$31.9
2030	$50.7	45%	$22.8	63%	$32.0
2031	$50.8	45%	$22.8	63%	$32.0
2032	$50.9	45%	$22.9	63%	$32.1
2033	$50.9	45%	$22.9	63%	$32.1
2034	$51.0	45%	$23.0	63%	$32.2
2035	$51.1	45%	$23.0	63%	$32.2
Total	**$1,451.6**		**$653.2**		**$915.6**
Ann Avg	**$50.1**		**$22.5**		**$31.6**

Source: Statewide funding from ODOT's *Financial Assumptions*, "Breakdown of 'Other Local Allocations' of Federal Funds." Updated in 2006. Allocation to Metro and conversion to 2007 dollars by ECONorthwest.
Note: Other federal funds includes funding from the Transportation Enhancement, Local Bridge, CMAQ, Rail/Highway Crossings, Safe Routes to Schools, High Risk Rural Roads, Borders and Corridors program and miscellaneous funding programs.

Alternative sets of assumptions were used to establish a range of funding from these federal sources that could be considered reasonably available to the Metro region:

- At a minimum, the Metro region should receive at as much funding from these federal sources as its share of the State Highway Trust Fund distributed to cities and counties, which is 45% in 2006. This assumption results in total funding of $653.2 million or an average of $22.5 million per year to the Metro region between 2007 and 2035 (in 2007 dollars).

- Metro could receive the level of funding estimated in the 2004 RTP, which identifies total funding of over $800 million (2007$) over the planning period from federal sources including (converted to 2007$):
  $240 million in CMAQ funds,
  $121 million in Bridge funds,
  $37 million of Enhancement funds,
  $37 million from safety funds,
  $297 million of demonstration funds, and
  $76 million of Borders and Corridors funding.
- Metro could continue to receive its current share of funding from CMAQ, HBRR, and Enhancements as indicated by recent STIPs, with at least 45% of total funding from other federal sources. This set of assumptions results in total funding of $915.6 million or an average of $31.6 million per year to the Metro region between 2007 and 2035 (in 2007 dollars).

Table 3-4 shows the level of funding from other federal sources that results from using the first and last of these assumptions. The funding from federal sources estimated in the 2004 RTP—$800 million (2007$)—is within the range of the two bookend assumptions (between $650 and $915 million in funding).

STATE HIGHWAY TRUST FUND APPORTIONMENT TO LOCAL JURISDICTIONS IN THE METRO REGION

State Highway Trust Fund (SHTF) revenue is generated primarily by statewide fuel taxes and vehicle registration fees. SHTF revenue is allocated to counties based on their share of statewide vehicle registrations, and to cities based on their share of population in all cities in the state. These funds must be used for roadway-related expenses, but they can be used for capital or OM&P costs. ODOT's *Financial Assumptions* includes four scenarios for future statewide SHTF revenue:

- Continuation of existing trends (no change to the state gas tax or vehicle registration fee).
- A $15 increase in the biennial vehicle registration fee every eight years.
- A $0.01 per gallon increase in the state gas tax every year from 2006 through 2035.
- The combined effect of both the state gas tax increase and the vehicle registration fee increase.

For all of the scenarios, because ODOT does not disaggregate the SHTF forecasts beyond the total allocations to counties and cities. To forecast SHTF revenue allocated to counties and cities in the Metro region, we assumed that their share will remain at their current levels between 2007 and 2035 (39% of the statewide county share, and 45% of the statewide city share). This is a reasonable assumption because the Oregon Office of Economic Analysis (April 2004) predicts the Metro region as a whole will grow only slightly faster than the state as a whole between 2005 and 2035.

The result of each of these scenarios for the amount of State Highway Fund revenue allocated to Metro region's cities and counties is shown in Table 3-5. The assumptions behind estimates for each scenario in Table 3-5 is described in more detail in the following sections.

Table 3-5. Annual allocation of State Highway Trust Fund revenue to cities and counties in the Metro region under various scenarios (millions of 2007 dollars)

Year	Existing Trends	Registration Fee Increase	Gas Tax Increase	Registration Fee + Gas Tax Increase
2007	$112.8	$122.8	$127.7	$250.5
2008	$118.5	$118.5	$128.0	$246.5
2009	$116.7	$116.7	$130.7	$247.4
2010	$115.3	$121.5	$133.8	$255.3
2011	$114.7	$120.7	$137.5	$258.2
2012	$112.3	$118.2	$139.3	$257.5
2013	$110.1	$115.8	$141.1	$256.9
2014	$107.8	$113.4	$142.8	$256.2
2015	$105.6	$111.1	$144.5	$255.6
2016	$103.5	$108.8	$146.1	$254.9
2017	$101.4	$106.5	$147.6	$254.1
2018	$99.3	$109.3	$149.0	$258.3
2019	$97.3	$107.1	$150.4	$257.5
2020	$95.3	$104.8	$151.8	$256.6
2021	$93.4	$102.6	$153.0	$255.6
2022	$91.5	$100.5	$154.3	$254.8
2023	$89.6	$98.4	$155.4	$253.8
2024	$87.8	$96.3	$156.5	$252.8
2025	$86.0	$94.3	$157.6	$251.9
2026	$84.2	$96.4	$158.6	$255.0
2027	$82.5	$94.3	$159.5	$253.8
2028	$80.8	$92.4	$160.4	$252.8
2029	$79.2	$90.4	$161.2	$251.6
2030	$77.6	$88.5	$162.0	$250.5
2031	$76.0	$86.6	$162.8	$249.4
2032	$74.4	$84.8	$163.6	$248.4
2033	$72.9	$83.0	$164.5	$247.5
2034	$71.4	$84.5	$165.6	$250.1
2035	$70.0	$82.7	$166.7	$249.4
Total	**$2,727.9**	**$2,970.9**	**$4,372.0**	**$7,342.9**
Ann Avg	**$94.1**	**$102.4**	**$150.8**	**$253.2**

Source: Existing Trends based on ODOT, *Summary of Transportation Economic and Revenue Forecasts*, June 2006.. For analysis purposes, "existing trends" is considered as existing resources. Other scenarios from ODOT, *Financial Assumptions*. Conversion to 2007 dollars by ECONorthwest.

Existing Trends: no change to gas tax or vehicle registration fees

ODOT's *Financial Assumptions* show that an assuming no change in the gas tax or vehicle registration fees would result in only modest revenue increases that are well below the expected level inflation. As a result, the constant dollar value of the State Highway Trust Fund would decline over time. ODOT finds that this

would result in a sharp decline in the condition of pavement and bridges in the state system, and therefore rejects this scenario in its *Financial Assumptions*.

Despite being rejected in ODOT's *Financial Assumptions*, this scenario is modeled in ODOT's *Summary of Transportation Economic and Revenue Forecasts*[7]. This scenario results in total State Highway Trust Fund apportionments to cities and counties increasing an average of 1% per year from FY06 to FY11. The Existing Trends forecast in Table 3-5 assumes that total revenue for county and city apportionments continues to grow at 1% per year beyond 2011. With expected increases in overall inflation at 3.1% per year, this assumption for growth of State Highway Fund revenue results in declining annual revenue available for apportionment to counties and cities in constant dollars.

In constant 2007 dollars, the level of annual State Highway Trust Fund revenue allocated to counties and cities in the Metro region under this scenario would decrease from $122.8 million in 2007 to $70.0 million in 2035. This scenario results in total SHTF funding in the region of $2.7 billion over the planning period for the RTP.

Registration Fee Increase: $15 increase in biennial vehicle registration fee every 8 years

ODOT presents this scenario as a means to increasing funding available for modernization projects that improve the capacity of the existing transportation system. Based on ODOT's estimates of the statewide revenues expected from an $15 increase in vehicle registration fees every eight years, and assuming no change in the share of State Highway Trust Fund revenue allocated to counties and cities in the Metro region, this scenario results in declining annual State Highway Trust Fund revenue in constant dollars. Table 3-5 shows that annual State Highway Trust Fund revenue allocated to counties and cities in the region would decline from $122.8 million in 2007 to $82.7 million in 2035 in constant 2007 dollars. This scenario results in total SHTF funding in the region of $2.9 billion over the planning period for the RTP.

Gas Tax Increase: $0.01 per gallon annual increase in state gas tax

ODOT presents this scenario as a means to increasing funding for OM&P expenditures. Based on ODOT's estimates of the statewide revenues expected from this gas tax increase, and assuming no change in the share of State Highway Trust Fund revenue allocated to counties and cities in the Metro region, this scenario results in increasing annual revenue in constant dollars. Table 3-5 shows that annual SHTF revenue allocated to counties and cities in the region would increase from $127.7 million in 2007 to $166.7 million in 2035, in constant 2007 dollars. This scenario results in total State Highway Trust Fund funding in the region of $4.4 billion over the planning period for the RTP.

[7] ODOT Financial Services. Summary of Transportation Economic and Revenue Forecasts. June 2006.

Registration Fee + Gas Tax Increase: combined effect of both increases

Based on ODOT's estimates of the statewide revenues expected from an increase in vehicle registration fees and a gas tax increase, and assuming no change in the share of State Highway Trust Fund revenue allocated to counties and cities in the Metro region, this scenario results in steady annual revenue in constant dollars. Table 3-5 shows that annual State Highway Trust Fund revenue allocated to counties and cities in the region in this scenario would hover at around from $250 million annually (in 2007$) over the planning period. This scenario results in total SHTF funding in the region of $7.3 billion from 2007 to 2035.

OREGON TRANSPORTATION INVESTMENT ACT (OTIA)

The Oregon Transportation Investment Act (OTIA) is a statewide bond program that will provide $3 billion over ten years to fund critical investments in Oregon's transportation system. OTIA III, the third phase of this program, will provide funding for projects through 2011. Funding from OTIA is reflected in the forecast of ODOT funding available for modernization shown in Table 3-1.

Funding to repay OTIA bonds comes from increases in motor vehicle and trucking fees. Payments for this debt will reduce the level of future revenue available for funding transportation needs. The forecasts from ODOT's *Financial Assumptions* in this chapter reflect the effect of using future revenue to repay OTIA bonds. ODOT's *Financial Assumptions* explicitly assumes no additional bonding of future revenues by the state to fund transportation projects.

LOCALLY-GENERATED REVENUES

Chapter 2 shows the level of revenue generated by counties and cities in the Metro region from local revenue sources. For the whole Metro region, Table 2-9 shows that local revenue sources generated an average of $173.3 million or 51% of annual road-related revenue available to counties and cities between 2003 and 2005. The largest local revenue sources, and the average annual amount they generated for counties and cities in the Metro region between 2003 and 2005, include:

- Property taxes and transfers from non-road funds ($45.0 million)
- System Development Charges and Transportation Impact Fees ($22.8 million)
- Special Area Assessments ($12.7 million)
- Local fuel taxes ($8.9 million)
- Transportation Utility Fees ($2.2 million)
- Franchise Fees ($1.2 million)
- Urban renewal ($XX million)

This section identifies assumptions for estimating the amount of funding from these local sources that could be reasonably available to counties and cities in the Metro region over the planning period for the RTP.

General property taxes and transfers from non-road funds

Transfers from non-road funds, primarily the General Fund, is a major source of road-related revenue for counties and cities in the Metro region. Revenue in the General Fund of counties and cities is primarily from property taxes, but the General Fund and other non-road funds can include revenue from a variety of sources. Data on road-related revenues and expenditures in counties and cities in the Metro region shows that transfers from non-road funds, and property tax revenue dedicated explicitly for road expenditures, generated annual revenue for counties and cities averaging $45 million between 2002 and 2004.

A major portion of this funding is from Washington County's Major Streets Transportation Improvement Program (MSTIP). Originally a serial property tax levy dedicated for transportation needs, property tax legislation in the late 1990s made this levy part of the County's permanent taxing rate. Revenue from this levy now goes to the County's General Fund. Washington County transfers substantial revenue from non-road funds for road-related expenditures, an average of $23.1 million per year between 2005 and 2007. Because it is not part of the County's permanent rate, revenue from the MSTIP levy is no longer required to be used for road-related expenditures. The 2004 RTP estimates it will continue to provide an average of $14 million per year in constant dollars.

Revenue in the General Fund can be spent on a wide variety of public needs, not only roads or transportation. Thus, future funding for roads from transfers from non-road funds depends on policy decisions by elected officials on how much funding to transfer. Given the competing demands for public funding, future allocations of non-road funds for road-related expenditures is difficult to predict. As a baseline assumption, we can assume that the current allocation of non-road funds to roads will continue in the region—while some jurisdictions may choose to transfer less funding to roads, others may choose to transfer more.

The largest source of revenue in the General Fund of local jurisdictions is from property taxes. Growth in property tax revenue is partially limited by Oregon laws that limit non-school permanent tax rates to $10 per $1,000 assessed value, but voters can approve short-term local option levies. In addition, increases in the assessed value of existing property is limited to 3% per year, unless the property is substantially improved or has a change in zoning.

Data from the Oregon Department of Revenue[8] shows that total assessed value in Clackamas, Multnomah, and Washington counties grew at an average annual rate of 5.4% between 1999-00 and 2005-06, and total property taxes imposed grew at an average annual rate of 5.3% in the same period (in nominal dollars). We applied this growth rate to the current level of road-related funding from non-

[8] State of Oregon, Department of Revenue. *Oregon Property Tax Statistics*. Fiscal Year 2000-01 and 2005-06. Table A.2.

road funds in counties and cities in the Metro region—$45 million annually—to estimate the level of future funding in the region from this source. This assumption results in annual revenue from non-road funds in the region increasing from $45 million in 2007 to $83.7 million in 2035, for total revenue of $1.8 billion (in 2007$) over the planning period.

System Development Charges and Transportation Impact Fees

Most cities and counties within the Metro region have System Development Charges (SDCs) or Traffic Impact Fees (TIFs) that are paid by new development for infrastructure needed to serve demand generated by that new development. Revenues from SDCs are limited to use for expanding transportation infrastructure to accommodate growth. SDC revenue cannot be used to address deficiencies in the transportation system that are not caused by growth, or for OM&P expenditures.

Annual revenues from SDCs and TIFs vary across the jurisdictions in the region due to various levels of growth and development in those jurisdictions as well as the level of charges and fees in those jurisdictions. Data on road-related revenues and expenditures in counties and cities in the Metro region shows that SDCs and TIFs generated revenue averaging $22.8 million per year between 2002 and 2004.

In theory, SDCs and TIFs can be set to charge the full cost of infrastructure needed to serve demand generated by growth and development in a community. In practice, however, revenue from these sources is often short of the full cost of infrastructure needed to serve growth for several reasons. First, SDC and TIF methodologies that are used to establish rates often do not include the full cost of all projects needed to serve demand from growth, in part because not all of the needed projects are known ahead of time. Second, many jurisdictions, by policy, set their SDC and TIF rates at a level below that needed for full cost recovery. This report does not assess the ability of SDCs and TIFs in each jurisdiction to fully fund transportation infrastructure costs needed to serve demand generated by growth and development.

Future revenue from SDCs and TIFs, therefore, depend on the level of future growth as well as policy decisions by elected officials on what rates to charge. In addition, most SDC and TIF legislation allows automatic increases in rates to reflect increases in the cost of road construction, which have grown at an average annual rate of 4.1% between 1987 and 2005 in nominal dollars.[9]

Population in the three counties of the Metro region grew at an average annual rate of 1.3% between 2002 and 2004, the same rate of growth as predicted by the state Office of Economic Analysis for these counties between 2005 and 2035.

[9] Oregon Department of Transportation. "Oregon Highway Construction Cost Trends," 1987–2006 (second quarter). ODOT's construction cost index increased by 67% between the first and second quarter of 2006, but we do not expect this high rate of increases to continue in the long-run.

This the current level of SDC revenue in the region was generated from a level of growth that is expected to continue in the region over the planning period. Thus, without policy decisions to increase SDC or TIF rates, growth in the region should continue to generate SDC and TIF revenue at the current level, with increases to reflect the increases in underlying road construction costs.

This assumption results in annual revenue from SDCs and TIFs in the region increasing from $22.8 million in 2007 to $29.9 million in 2035, for total revenue of $760.6 million over the planning period for the RTP (in 2007 dollars). Additional funding from SDC and TIF revenue could be available if construction costs increase at a rate higher than 4.1% per year or from policy decisions by elected officials to implement SDCs/TIFs or increase the recovery rate of the charges.

Special area assessments

Special area assessments can be used for capital projects or maintenance of the existing system within the assessment area. Assessment areas for capital improvements are called Local Improvement Districts (LIDs) and those for maintenance are called Road Maintenance Districts. Seven cities in the Metro region reported using LIDs or other special assessments (Portland, Oregon City, Lake Oswego, Wilsonville, Tigard, Hillsboro, and Beaverton). All of these cities except Tigard received less than $1 million annually from this source. In addition, it is known that Washington County has an Urban Road Maintenance District (URMD), but it is not clear where revenue from this source is reported in the ODOT Local Finance data used in Chapter 2. That data shows that counties and cities in the Metro region received total revenue averaging $12.7 million per year between 2002 and 2004 from Special Area Assessments.

We expect counties and cities in the Metro region to continue to use Special Area Assessments to fund transportation maintenance and improvement projects. At a minimum, funding from this source should keep pace with inflation, continuing to average contributions of $12.7 million per year for total revenue of $367.1 million over the planning period (in 2007 dollars).

Local fuel taxes

Counties and cities in Oregon are allowed to implement a local fuel taxes if approved by voters. Revenue from tax can be used for capital projects and OM&P.

Multnomah County and Washington County are the only two counties in Oregon with this local fuels tax, at 3 cents and 1 cent per gallon respectively on gasoline and gasoline blends. Currently 11 cities in Oregon also have a local gas tax, ranging from 1 cent to 5 cents per gallon.[10] County gas taxes are charged in

[10] Oregon cities with a local gas tax are Woodburn, Eugene, Springfield, Cottage Grove, Veneta, Tillamook, The Dalles, Stanfield, Sandy, Oakridge, and Dundee. Oregon Department of Transportation, Fuels Tax Group. "Required Gasoline Disclosures." http://www.oregon.gov/ODOT/CS/FTG/reqgasdiscl.shtml. Accessed October 9, 2006.

addition to state gas taxes, and city gas taxes are charged in addition to county and state taxes.

While none of the cities listed by ODOT as having a local fuel tax are in the Metro region, four cities reported revenue from a fuel tax in the ODOT Local Finance data used in Chapter 2: Beaverton, Forest Grove, Sherwood, and Tigard. Revenue from this source contributed an average of $8.9 million per year for jurisdictions in the Metro region between 2002 and 2004.

If this tax rate is not increased, and fuel sales remain constant (reflecting a balance between population growth and increased vehicle fuel efficiency), the amount of annual revenue from local gas taxes will decrease to less than half the current level by 2035, from $8.9 million to $3.8 million. To keep up with inflation, Washington County's gas tax would need to increase to 7 cents per gallon by 2035, and Multnomah County's would need to increase to 2.4 cents per gallon.

Transportation Utility Fee

Transportation utility fees, also known as street maintenance fees, are charged to all residents and businesses in a jurisdiction on a monthly bases. These fees are typically charged in proportion to the property's expected trip generation. Transportation utility or street maintenance fees do not have to be approved by voters; they can be approved by ordinance. Since these fees are charged for street maintenance, they are dedicated to use for street OM&P needs.

One county and three cities in the Metro region reported revenue from a Transportation Utility Fee in the ODOT Local Finance data used in Chapter 2. One additional city in the Metro region reports charging a Transportation Utility Fee, but no revenue figures from this fee are available. Average rates and total revenue for cities in the Metro region with a Transportation Utility Fee are:

- Wilsonville ($4 per month for a single-family housing unit, $2.60 per month for a multi-family unit, and varying amounts for commercial development): $549,000 received in FY05.
- Tualatin ($3.42 per month for a single-family home, $2.86 per month for a multi-family unit, and varying rates per square foot for other types of development): $663,000 received in FY05.
- Tigard ($2.18 per month for a housing unit, $0.78 per parking space per month for non-residential): implemented April 2004--no revenue figures available.
- Lake Oswego (unknown rate): $959,000 received in FY05.

ODOT Local Finance data shows that Transportation Utility Fees generated an average of $2.1 million per year for jurisdictions in the Metro region between 2002 and 2004. If these fees are increased periodically to account for inflation, they will continue to generate an average of $2.1 million per year in the Metro region, for total funding of $62.2 million over the planning period (in constant dollars). It is likely, however, that additional jurisdictions in the Metro region will

adopt Transportation Utility Fees to address the growing demand for maintenance of the existing street system, generating additional revenue for transportation in the Metro region.

Franchise Fees

Franchise fees are charged to utility companies for their use of public right-of-way. Since most of this right-of-way is on public streets, Franchise Fee revenue is often dedicated to streets maintenance and improvement projects, but using these funds for streets is not mandatory. Some jurisdictions track revenue from Franchise Fees directly in their Road Fund, while others send this revenue to their General Fund and make transfers from that fund to the Road Fund for road expenditures.

ODOT Local Finance data shows that Franchise Fees generated an average of $1.2 million per year for jurisdictions in the Metro region between 2002 and 2004. If these fees are increased periodically to account for inflation, they will continue to generate an average of $1.2 million per year in the Metro region, for total funding of $35.5 million over the planning period (in constant dollars).

Other local funding sources

Chapter 2 shows that local funding sources generated an average of $173.3 million annually for counties and cities in the Metro region between 2002 and 2004. Of this revenue, $92.7 or 54% is generated by the individual funding sources considered in this section: transfers from non-road funds, SDCs/TIFs, Special Area Assessments, Fuel Taxes, Transportation Utility Fees, and Franchise Fees. $43.1 million or 25% is from the Sale of Bonds and Notes and transfers between cities and counties in the region. The remaining $37.5 million or 22% of annual local funding is from other sources, primarily from parking fees and fines, interest income, permit fees, land sales, and other sources.

Assuming that funding from these other sources grows at the rate of inflation, they will continue to contribute an average of $37.5 million for road-related expenditures in the Metro region, for a total of $1.1 billion over the planning period (in 2007$).

Private sector contribution

Virtually all development, public and private, makes some contribution to the provision of transportation infrastructure. From a funding perspective, any development, large or small, that produces improvements otherwise anticipated through the TSP or the CIP and eligible for credit (SDC or TIF), has already been accounted for. The question being pursued is what amount of funding is development contributing to the expansion of the transportation system that is not otherwise accounted for through SDC or TIF. No definitive answer is available.

Here is some of what is known. As more and more of the system approaches capacity, more and more development projects, of any size, are being conditioned with "non-eligible" improvements. Small-scale developments are most likely to

trigger improvement needs at the intersection level (additional turn lanes, new traffic signals, etc.). These investments can range from $50,000 to more than $500,000 per small-scale development. Large-scale developments are triggering more significant improvement needs and at greater distances from the site (again, because the system as a whole is approaching capacity) and end up making investments in intersection, corridor, and even interchange improvements. These investments can range from $2 million to $10 million per large-scale development project. Again, these numbers are above and beyond the conditioned improvements that are eligible for credit.

Local agencies throughout the region experience scores of development applications on an annual basis. In addition, there are probably 10 to 30 large-scale development applications that occur in the same timeframe. Unfortunately, no centralized warehouse of data exists to readily determine the amount of development funding being invested in local and regional transportation system improvements. Further research is necessary to estimate or quantify this. For the purposes of this *Financial Fact Base,* it is safe to say that somewhere between $10 million and $100 million are annually being invested by development in transportation improvements, separate from any SDC/TIF contribution.

Table 3-6. Summary of road-related revenue to counties and cities in the Metro region from local sources (millions of 2007 dollars)

Year	Non-Road Funds	SDC/ TIF	Special Area Assessments	Local Gas Tax	Transportation Utility Fees	Franchise Fees	Other Local Sources	Total
2007	$45.0	$22.8	$12.7	$8.9	$2.1	$1.2	$37.5	$130.2
2008	$46.0	$23.1	$12.7	$8.6	$2.1	$1.2	$37.5	$131.1
2009	$47.0	$23.3	$12.7	$8.4	$2.1	$1.2	$37.5	$132.1
2010	$48.1	$23.5	$12.7	$8.1	$2.1	$1.2	$37.5	$133.2
2011	$49.1	$23.7	$12.7	$7.9	$2.1	$1.2	$37.5	$134.2
2012	$50.2	$24.0	$12.7	$7.6	$2.1	$1.2	$37.5	$135.3
2013	$51.4	$24.2	$12.7	$7.4	$2.1	$1.2	$37.5	$136.5
2014	$52.5	$24.4	$12.7	$7.2	$2.1	$1.2	$37.5	$137.6
2015	$53.7	$24.7	$12.7	$7.0	$2.1	$1.2	$37.5	$138.8
2016	$54.9	$24.9	$12.7	$6.8	$2.1	$1.2	$37.5	$140.1
2017	$56.1	$25.2	$12.7	$6.6	$2.1	$1.2	$37.5	$141.3
2018	$57.4	$25.4	$12.7	$6.4	$2.1	$1.2	$37.5	$142.6
2019	$58.7	$25.6	$12.7	$6.2	$2.1	$1.2	$37.5	$144.0
2020	$60.0	$25.9	$12.7	$6.0	$2.1	$1.2	$37.5	$145.4
2021	$61.4	$26.1	$12.7	$5.8	$2.1	$1.2	$37.5	$146.8
2022	$62.7	$26.4	$12.7	$5.6	$2.1	$1.2	$37.5	$148.2
2023	$64.1	$26.7	$12.7	$5.5	$2.1	$1.2	$37.5	$149.7
2024	$65.6	$26.9	$12.7	$5.3	$2.1	$1.2	$37.5	$151.3
2025	$67.1	$27.2	$12.7	$5.1	$2.1	$1.2	$37.5	$152.8
2026	$68.6	$27.4	$12.7	$5.0	$2.1	$1.2	$37.5	$154.5
2027	$70.1	$27.7	$12.7	$4.8	$2.1	$1.2	$37.5	$156.1
2028	$71.7	$28.0	$12.7	$4.7	$2.1	$1.2	$37.5	$157.8
2029	$73.3	$28.2	$12.7	$4.6	$2.1	$1.2	$37.5	$159.6
2030	$74.9	$28.5	$12.7	$4.4	$2.1	$1.2	$37.5	$161.3
2031	$76.6	$28.8	$12.7	$4.3	$2.1	$1.2	$37.5	$163.2
2032	$78.3	$29.1	$12.7	$4.2	$2.1	$1.2	$37.5	$165.0
2033	$80.1	$29.4	$12.7	$4.0	$2.1	$1.2	$37.5	$166.9
2034	$81.9	$29.6	$12.7	$3.9	$2.1	$1.2	$37.5	$168.9
2035	$83.7	$29.9	$12.7	$3.8	$2.1	$1.2	$37.5	$170.9
Total	**$1,810.2**	**$760.6**	**$367.1**	**$174.1**	**$62.2**	**$35.5**	**$1,086.1**	**$4,295.7**
Ann Avg	**$62.4**	**$26.2**	**$12.7**	**$6.0**	**$2.1**	**$1.2**	**$37.5**	**$148.1**

Source: ECONorthwest, from assumptions described in this section.

SUMMARY OF FORECASTED FUNDING FOR ROADS

This chapter estimates the amount of revenue at the state, county, and local level that could be reasonably expected to be available for road-related expenses in the Metro region from 2007 to 2035. An aspect of funding that will have an important impact on planning for the RTP is that revenue from some funding sources has restrictions on its use. Revenue from SDCs, for example, can only be used for capital projects that expand facilities to accommodate demand generated by growth. While many road-related revenue sources have some restrictions that limit their use, and some have very specific restrictions, in general funding can be classified into capital only, OM&P only, and flexible. Table 3-7 summarizes revenue available for road-related expenditures in the Metro region by type of restriction for each of the three sets of assumptions used in this chapter to establish the range of revenue that is reasonably available in the region.

Table 3-7. Summary of road-related revenues available for expenditures in the Metro region by restriction on use, 2007–2035 (millions of 2007 dollars)

	E				E+				E++			
Year	Capital Only	OM&P Only	Flexible	Total	Capital Only	OM&P Only	Flexible	Total	Capital Only	OM&P Only	Flexible	Total
2007	$100.6	$2.1	$232.9	$335.6	$119.2	$2.1	$237.7	$359.0	$122.2	$2.1	$237.7	$362.0
2008	$95.6	$2.1	$228.4	$326.1	$114.1	$2.1	$237.9	$354.1	$116.9	$2.1	$237.9	$357.0
2009	$94.5	$2.1	$227.0	$323.6	$112.6	$2.1	$241.1	$355.8	$115.4	$2.1	$241.1	$358.6
2010	$91.6	$2.1	$226.5	$320.2	$109.7	$2.1	$245.0	$356.9	$112.5	$2.1	$251.2	$365.8
2011	$91.5	$2.1	$226.7	$320.4	$109.7	$2.1	$249.5	$361.4	$112.5	$2.1	$255.6	$370.2
2012	$92.2	$2.1	$225.3	$319.6	$110.3	$2.1	$252.3	$364.8	$113.1	$2.1	$258.1	$373.4
2013	$82.1	$2.1	$223.9	$308.2	$100.3	$2.1	$255.0	$357.4	$103.1	$2.1	$260.7	$366.0
2014	$82.4	$2.1	$222.6	$307.1	$100.6	$2.1	$257.7	$360.4	$103.4	$2.1	$263.2	$368.8
2015	$82.6	$2.1	$221.4	$306.2	$100.9	$2.1	$260.3	$363.3	$103.7	$2.1	$265.7	$371.6
2016	$82.9	$2.1	$220.3	$305.3	$101.2	$2.1	$262.9	$366.2	$104.0	$2.1	$268.2	$374.3
2017	$83.1	$2.1	$219.2	$304.5	$101.5	$2.1	$265.5	$369.1	$104.3	$2.1	$270.6	$377.1
2018	$83.4	$2.1	$218.3	$303.8	$101.8	$2.1	$268.0	$371.9	$104.6	$2.1	$278.0	$384.8
2019	$83.7	$2.1	$217.4	$303.2	$102.0	$2.1	$270.5	$374.7	$104.9	$2.1	$280.3	$387.3
2020	$83.9	$2.1	$216.5	$302.6	$102.3	$2.1	$273.0	$377.5	$105.2	$2.1	$282.5	$389.8
2021	$84.2	$2.1	$215.8	$302.1	$102.6	$2.1	$275.5	$380.2	$105.5	$2.1	$284.7	$392.4
2022	$84.4	$2.1	$215.1	$301.7	$102.9	$2.1	$277.9	$383.0	$105.8	$2.1	$286.9	$394.8
2023	$84.7	$2.1	$214.5	$301.4	$103.2	$2.1	$280.3	$385.7	$106.1	$2.1	$289.1	$397.3
2024	$85.0	$2.1	$214.0	$301.1	$103.5	$2.1	$282.7	$388.4	$106.4	$2.1	$291.3	$399.8
2025	$85.3	$2.1	$213.5	$300.9	$103.8	$2.1	$285.1	$391.1	$106.7	$2.1	$293.4	$402.3
2026	$85.5	$2.1	$213.2	$300.8	$104.1	$2.1	$287.5	$393.8	$107.0	$2.1	$299.6	$408.8
2027	$87.4	$2.1	$212.9	$302.5	$106.1	$2.1	$289.8	$398.1	$108.9	$2.1	$301.7	$412.8
2028	$87.7	$2.1	$212.6	$302.5	$106.3	$2.1	$292.2	$400.7	$109.2	$2.1	$303.7	$415.1
2029	$87.9	$2.1	$212.5	$302.5	$106.6	$2.1	$294.5	$403.3	$109.5	$2.1	$305.7	$417.4
2030	$89.6	$2.1	$212.4	$304.2	$108.3	$2.1	$296.9	$407.3	$111.2	$2.1	$307.8	$421.1
2031	$89.8	$2.1	$212.4	$304.4	$108.6	$2.1	$299.2	$409.9	$111.5	$2.1	$309.8	$423.4
2032	$90.0	$2.1	$212.5	$304.6	$108.8	$2.1	$301.6	$412.6	$111.7	$2.1	$312.0	$425.8
2033	$90.2	$2.1	$212.6	$305.0	$109.0	$2.1	$304.2	$415.4	$111.9	$2.1	$314.3	$428.4
2034	$90.4	$2.1	$212.8	$305.4	$109.2	$2.1	$307.0	$418.4	$112.1	$2.1	$320.0	$434.3
2035	$90.6	$2.1	$213.1	$305.9	$109.5	$2.1	$309.9	$421.5	$112.4	$2.1	$322.5	$437.1
Total	**$2,542.9**	**$62.2**	**$6,326.3**	**$8,931.5**	**$3,078.8**	**$62.2**	**$7,960.6**	**$11,101.7**	**$3,161.6**	**$62.2**	**$8,193.6**	**$11,417.4**
Ann Avg	**$87.7**	**$2.1**	**$218.1**	**$308.0**	**$106.2**	**$2.1**	**$274.5**	**$382.8**	**$109.0**	**$2.1**	**$282.5**	**$393.7**

Source: ECONorthwest, from assumptions and methods described in this chapter.

Some important implications of Table 3-7: shows under three sets of assumptions, in millions of 2007 dollars, is:

- Total funding available over the planning period (29 years) for road-related expenditures in the Metro region is roughly between $9 and $11 billion.
- The difference between the conservative and optimistic estimates of "reasonably available revenue" are relatively small: $0.3 billion, or an average of only about $11 million per year.
- Funding that is *required to be spent* on OM&P is small. The bulk of the funding is flexible and could be spent on either OM&P or capital. The amount that must be spent on capital (the bulk of which comes from ODOT modernization, federal funding programs, and local SDCs) leaves two to three times as much that could be spent on OM&P. Together, these points suggest that the region has all the latitude it needs to be allowed to allocate funds to capital or OM&P as it so chooses.
-

FUNDING FOR TRANSIT SERVICE IN THE METRO REGION

This section forecasts various transit-related funding sources at the federal, state, and local level from 2007 to 2035. The two local transit providers, TriMet and SMART, use these funds.

Federal transit formula funds are primarily for used for transit capital purchases such as buses and maintenance facilities. About $642 million was estimated to be available between 2000-2020.

FEDERAL TRANSIT AUTHORITY FUNDS

ODOT's Financial Assumptions document provides forecasts of the formula-based FTA Section 5307 funds and the discretionary FTA Section 5309 funds for the Portland area.

For Section 5307 funding, which is available for capital, maintenance, and operating costs, ODOT assumes that TriMet's allocation will increase at just over the rate of inflation from 2010 onwards, after the programmed funding from the current STIP. In constant 2007 dollars, this means TriMet's Section 5307 revenue rises slightly, from $33.6 million in 2007 to $37.9 million in 2035.

Table 3-8. Metro share of projected section 5307 formula funds, 2007–2035 (millions of 2007 dollars)

Year	Estimated Revenue
2007	$33.6
2008	$35.3
2009	$36.4
2010	$36.5
2011	$36.5
2012	$36.6
2013	$36.6
2014	$36.7
2015	$36.8
2016	$36.8
2017	$36.9
2018	$36.9
2019	$37.0
2020	$37.0
2021	$37.1
2022	$37.2
2023	$37.2
2024	$37.3
2025	$37.3
2026	$37.4
2027	$37.5
2028	$37.5
2029	$37.6
2030	$37.6
2031	$37.7
2032	$37.7
2033	$37.8
2034	$37.9
2035	$37.9
Total	**$1,072.4**
Ann Avg	**$37.0**
AAGR	**0.44%**

Source: ODOT *Financial Assumptions* document; Oregon Public Transit Division in consultation with TriMet. Data provided in "Projection of Section 5307 (formula) Funds" spreadsheet, March 2006. Conversion to 2007$ by ECONorthwest.

Table 3-8 shows flexible transit funds distributed to the region will remain relatively stable. Annual average growth rate of 5307 funds are expected to be less than 1%.

For Section 5309 funding, which is for capital projects only, ODOT's projections are less uniform over the 2007-2035 period, especially from 2007-2019. The forecast is for TriMet to receive, in constant 2007 dollars, from $70.5 million in 2007 to a high of $89.6 million in 2011, dropping to $55.3 million in 2018 before plummeting to $1.7 million from 2019-2035.

TriMet is also predicted by ODOT to receive discretionary distributions for maintenance of its light rail transit (LRT) system. In constant 2007 dollars, revenues are expected to climb from $5.5 million in 2007 to $8.0 million in 2035.

Table 3-9. Metro share of projected section 5309 formula funds and light rail rehabilitation revenue, 2007–2035

Year	Estimated Revenue	TriMet LRT Formula Rehabilitation
2007	$70.5	$5.5
2008	$89.5	$6.1
2009	$87.7	$6.5
2010	$81.9	$6.5
2011	$89.6	$7.3
2012	$86.9	$8.2
2013	$84.4	$8.1
2014	$61.7	$8.1
2015	$32.5	$8.1
2016	$42.6	$8.0
2017	$41.1	$8.0
2018	$55.3	$8.0
2019	$1.7	$7.9
2020	$1.7	$7.9
2021	$1.7	$7.8
2022	$1.7	$7.8
2023	$1.7	$7.8
2024	$1.7	$7.8
2025	$1.7	$7.8
2026	$1.7	$7.9
2027	$1.7	$7.9
2028	$1.7	$7.9
2029	$1.7	$7.9
2030	$1.7	$7.9
2031	$1.7	$7.9
2032	$1.7	$7.9
2033	$1.7	$7.9
2034	$1.7	$8.0
2035	$1.7	$8.0
Total	**$852.5**	**$222.5**
Ann Avg	**$29.4**	**$7.7**
AAGR	**-13.32%**	**1.32%**

Source: ODOT *Financial Assumptions* document; Oregon Public Transit Division in consultation with TriMet. Data provided in "Projection of Section 5307 (formula) Funds" spreadsheet, March 2006. Conversion to 2007$ by ECONorthwest.

Table 3-9 shows the trends in federal capital funding for transit in the region and available federal revenue for light rail maintenance. Funds already committed to future light rail projects are expected to be available for expenditure through 2018. Funding drops off thereafter because no additional funds have been identified or committed for projects beyond 2018.

The LRT rehabilitation funds remain relatively steady throughout the planning period. However, they appear to be lower than expected, as funds for light rail maintenance are typically set at 60% of planned light and streetcar projects.

STATE TRANSIT FUNDING

ODOT also forecasts transit support from the state's Special Transportation Fund (STF), which is used primarily for operation of transit systems for the elderly and disabled (including Americans with Disabilities Act compliance on general services). The STF is funded roughly half by a 2 cents per pack cigarette tax and roughly half by miscellaneous unrestricted state revenues. ODOT assumes that cigarette tax revenue will remain constant after 2011, and that the rest of the STF revenue will increase with inflation throughout the forecast period, for an average increase of around 2% annually. In constant 2007 dollars, TriMet's revenues are expected to decrease from roughly $2.7 million in 2007 to $2.1 million in 2035.

Finally, ODOT assumes that the state will supplement its support of transit programs with revenue that is now being devoted to repayment of lottery-backed bonds that paid for the Portland area's light rail system in the 1990s.

ODOT assumes that, based on the Metro region's population, it will receive $4.2 million in FY10 and approximately $6 million annually thereafter. In constant 2007 dollars, this annual amount declines to $2.5 million in 2035.

LOCAL TRANSIT FUNDING

The Portland area's TriMet system relies in large part on a payroll tax for the majority its operational funding. SMART also relies on a payroll tax to fund much of its operations. ECO's analysis of forecast data from TriMet and SMART estimates that about $9.1 billion (2007$) to be generated from payroll taxes (in constant 2007 dollars). Between TriMet and SMART, payroll taxes are estimated to generate about $190 million per year in 2007 and climb to over $460 million per year (2007$) by 2035, an average of about $315 million per year.

Table 3-10. Estimated revenue generated from payroll taxes for TriMet and SMART, 2007–2035 (millions of 2007$)

Year	TriMet	SMART	Total
2007	$191.21	$2.10	$193.31
2008	$197.93	$2.19	$200.12
2009	$204.46	$2.28	$206.75
2010	$211.22	$2.38	$213.60
2011	$218.20	$2.48	$220.69
2012	$225.43	$2.59	$228.02
2013	$232.91	$2.70	$235.61
2014	$240.65	$2.81	$243.47
2015	$248.66	$2.93	$251.59
2016	$256.94	$3.06	$260.00
2017	$265.51	$3.19	$268.70
2018	$274.38	$3.33	$277.71
2019	$283.56	$3.47	$287.03
2020	$293.05	$3.62	$296.67
2021	$302.88	$3.77	$306.65
2022	$313.04	$3.93	$316.97
2023	$323.56	$4.10	$327.66
2024	$334.44	$4.27	$338.71
2025	$345.70	$4.46	$350.15
2026	$357.33	$4.65	$361.98
2027	$366.90	$4.84	$371.75
2028	$376.73	$5.05	$381.78
2029	$386.82	$5.27	$392.08
2030	$397.18	$5.49	$402.67
2031	$407.82	$5.73	$413.55
2032	$418.75	$5.97	$424.72
2033	$429.97	$6.22	$436.20
2034	$441.50	$6.49	$447.99
2035	$453.33	$6.77	$460.10
Total	**$9,000.07**	**$116.13**	**$9,116.20**
Ann Avg	**$310.35**	**$4.00**	**$314.35**

Source: TriMet, FY 2006 Financial Issues Report #1, Financial Analysis and Forecast. TriMet. Fall 2005; City of Wilsonville Transit Master Plan, October 2006. Data calculations and conversion (to 2007$) by ECONorthwest.

Table 3-10 shows payroll tax revenues for the two transit providers operating in the region. TriMet revenues are primarily from employer payroll taxes but also include self-employment taxes and state in-lieu payments. Funds from payroll taxes grow from about $190 million in 2007 to $450 million per year (2007$) in 2035, an average of about $310 million per year (2007$) over the planning period

SMART reports payroll tax revenues to be about $2.1 million in 2007. ECO estimated revenue growth over the planning period based on historic annual average growth in funding from 1992 to 2005 (7.5%). Thus, revenues for SMART are projected to increase to about $7 million per year (2007$) by 2035. On average, SMART revenues will be about $4 million per year (2007$) over the planning period.

SUMMARY OF FUNDING FOR TRANSIT

This section described the amount of revenue at the federal, state, and local level that could be reasonably expected to be available for transit-related expenses in the Metro region from 2007 to 2035. The story told by these forecasts can be summarized as follows:

- Flexible funding for transit from federal sources are expected to keep up with inflation. However, funds restricted for capital expenditures are uneven from 2007-2035. While some funds for capital expenditures will eventually decline by 2035, funds earmarked for light rail transit capital are expected to increase slightly.
- Funding from the state will generally grow in step with inflation.
- Local funding, primarily from payroll taxes are expected to grow in line with inflation and employment growth. Increases in the payroll tax, however, are likely. The potential increase is described further in the next section.

Chapter 4 Future Transportation Costs in the Metro Region

This chapter describes the future costs associated with the need to maintain, preserve, and improve the region's transportation system. The focus of this chapter is on the regional system that encompasses road and transit networks located within the Portland Metropolitan region vital to the safe and efficient movement of people and freight. It includes biking and hiking trails that provide balance to the vehicular transportation system.

Accurately estimating the costs of *the regional system* is important. It will help Metro to identify its funding gap and decide which projects do the best job of advancing its goals, namely those that improve the mobility and effectiveness on *the regional system.* For this *Financial Fact Base* the goal is to illustrate the order of magnitude of the likely future costs of expanding and maintaining the regional transportation system.

This section breaks up the cost estimates into two categories: costs for road and transit systems, and within each system by capital improvements costs for operation, maintenance and preservation.

Information on costs for inclusion in the 2035 RTP have not been fully developed. In that context, this chapter uses available information to describe the magnitude of future costs that will be needed to maintain and improve the region's roads and transit services. This chapter starts with a summary of revenues and costs identified in the 2004 RTP.

COSTS FOR THE HIGHWAY AND ROAD SYSTEM

CAPITAL IMPROVEMENTS

Capital costs are estimated considering projects of statewide significance that are within the region and part of the regional transportation system, local survey responses, the current RTP, and reasonable expansions to the regional system not covered in the other categories.

REGIONAL MODERNIZATION PROJECTS OF STATEWIDE SIGNIFICANCE

In 2002, The Oregon Transportation Commission adopted a list of "Projects of Statewide Significance."[1] The list includes five major projects located in the region (figures in approximate 2007$):

[1] See Table E-12 in Appendix E for complete documentation of the funding adequacy of "Projects of Statewide Significance."

- I-5 / Columbia River Crossing (in cooperation with the State of Washington) [$1.1 billion]
- I-205 improvements [$1.3 billion]
- Sunrise Corridor—connecting the Portland region to the new community of Damascus and Central Oregon [$570 million]
- I-5 / 99W Connector—connecting the Portland region to Yamhill County and the Oregon Coast [$580 million]
- I-5 / I-405 loop in central Portland [$280 million for Phase 1]

Table 4-1. Estimated total costs for regional modernization projects of statewide significance, 2007 (millions of 2007$)

Project	Estimated Cost
I-5 / Columbia River Crossing	$1,111
I-205 improvements	$1,255
Sunrise Corridor (to Damascus)	$571
I-5 / 99W Connector	$582
I-5 / I-405 loop central Portland	$282
Total	**$3,800**

Source: ODOT, "Projects of Statewide Significance" document, 5/31/06. Conversion to 2007$ by ECONorthwest using building construction costs index.

Table 4-1 tallies the cost of the region's major capital projects. At a combined estimate of about $3.8 billion (2007$), financing the through STIP is impractical. After debt payments, about $49 million a year is available through STIP funds *for the whole state*. If those funds were even available to dedicate to just one project, it would take decades to complete the project and defer action on projects elsewhere in the state and region.

These projects have been identified as important segments of the state highway system through the region: for the mobility of people and freight. We do not address as part of this financial analysis how important these projects are relative to other projects. We simply note that together the five projects are estimated to require on the order of 30% to 40% of the region's total highway budget for the next 30 years. Funding through the STIP is severely limited. Completion of these large projects will require other funding sources. For example, if tolls were acceptable and supported by the public, these large projects might get built as public-private partnerships.

OTHER REGIONAL MODERNIZATION PROJECTS

Other capital costs were estimated using data derived from local surveys, an analysis of a sample of transportation system plans (TSPs) in the region, and reflecting on the information available in the current RTP.

Table 4-2. Various estimated total costs for other regional road-related modernization projects, 2007 (millions of 2007$)

Data Source	Estimated Cost
Local surveys	$3,900
Sample of TSPs	$2,700
Conversion of 2004 RTP data	$3,600
Average	**$3,400**

Source: ECONorthwest compiled from local surveys and the 2004 RTP. Kittleson and Associates, Inc., research based on a sample of TSPs from the region's largest municipalities.

Table 4-2 summarizes estimated costs of regional modernization projects typically owned by cities and counties. Because it is difficult to exactly discern or even calculate precise costs for regional roadway modernization projects undertaken by local jurisdictions, ECO opted to determine the range of likely costs. We analyzed various sources of data, including information from surveys of local jurisdictions and agencies, a sample of local TSPs, and the previous 2004 RTP. The estimated costs ranged from $2.7 to $3.9 billion (2007$), with an average of about $3.4 billion (2007$). The analysis of each data source is summarized below.

Data from local surveys indicated that about $200 million a year was expended on capital projects from FY2002/03–FY2004/05. From the data, however, we could not differentiate what was expended on the regional system. Assuming an equivalent of $200 million (in 2007$) per year from 2007–2035 would generate a cost of about $3.9 billion (2007$) in total capital improvements.

Kittelson and Associates, Inc., transportation engineers and subconsultants to ECO, analyzed a sample of local TSPs and their project costs. The sample included the largest of the region's jurisdictions. The study estimated that 68% of total estimated transportation costs were for improvements that were part of the regional system (generally major arterials and collectors; $2.4 billion of about $3.5 billion in total capital improvement). Applying that percentage to the $3.9 billion (the estimate derived from local surveys in the previous paragraph) yields an estimate of about $2.7 billion for modernization of the regional system in cities and counties.

Looking at another measure of potential costs, the current RTP estimated construction and improvement of city- and county-owned regional road facilities to cost $3.6 billion (2007$) through 2020.[2] This does not include recent urban growth boundary expansion areas, especially the city of Damascus and possible future expansions from 2020 to 2035.

Given the available data, it is not unreasonable to estimate that regional road modernization could be in the ballpark of $2.7 to $3.9 billion between 2007 and 2035. And with anticipated rising construction costs and expansion of the region,

[2] Figure converted from reported data in 2004 RTP in 1998$. Used CPI indices for 1998 and October 2006.

the overall costs for regional roadway in cities and counties are likely closer to, if not more than, $3.9 billion (in 2007$).

OPERATIONS, MAINTENANCE, AND PRESERVATION (OM&P)

There are a number of ways to look at and project operation, maintenance, and preservation costs of the transportation system. For this study, OM&P costs reviewed in the current RTP and new estimates are derived from analysis of local surveys, case studies, and recent reports published on the impacts of deferred maintenance. The conclusion remains the same: in the years ahead, operations, maintenance, and preservation costs for the transportation system within the Metro region will continue to rise.

STATE HIGHWAYS

Using 2004 RTP figures as base data, ECO estimated state highway operations, maintenance, and preservation cumulative costs to be about $5.3 billion (2007$) from 2007–2035.[3]

ECO calculates highway OM&P costs keeping steady from about $180 million per year in 2007 to $181 million per year (2007$) in 2020. Keeping pace with inflation, costs from 2020 to 2035 are calculated at $181 million per year (2007$) through 2035. This appears an underestimation of actual costs. The total costs give us an idea, however, of the order of magnitude of costs for state highway OM&P costs.

[3] Cost figures from the 2004 RTP were converted to constant 2007 dollars (2007$) for use in this report. For example, the $5.3 billion (in 2007$) figure, in this case, was derived from nominal present and future value of costs reported in the 2004 RTP: $135 million in 2000, $199 million in 2010, and $270 million in 2020. Using the derived growth rates from 2000 to 2010 (3.95% annual average growth rate) and 2010 to 2020 (3.01% AAGR), annual costs from 2000 to 2020 were calculated. Costs per year after 2020 were extrapolated to 2035 using the 3.01% AAGR. The annual costs in nominal dollars were then converted to 2007$ based on a 3.1% inflation rate.

Table 4-3. Estimated state highway OM&P costs, 2007–2035 (millions 2007$)

Year	Estimated Cost
2007	$177.1
2008	$178.6
2009	$180.1
2010	$181.6
2011	$181.6
2012	$181.6
2013	$181.6
2014	$181.6
2015	$181.6
2016	$181.6
2017	$181.6
2018	$181.6
2019	$181.6
2020	$181.6
2021	$181.5
2022	$181.5
2023	$181.5
2024	$181.5
2025	$181.5
2026	$181.5
2027	$181.5
2028	$181.5
2029	$181.5
2030	$181.5
2031	$181.5
2032	$181.5
2033	$181.5
2034	$181.5
2035	$181.5
Total	**$5,256.0**
Ann Avg	**$181.2**

Source: Metro 2004 RTP. Calculated and converted figures by ECONorthwest.

Table 4-3 is based on 2004 RTP, data (nominal present and future values from 2000 to 2020) converted to 2007 constant dollars and extrapolated out to 2035. Based on the 2004 RTP figures, costs stay relatively steady in constant dollars. This would seem a very conservative estimate. It shows, though, even at a conservative level, costs for state highway OM&P exceed $5 billion (2007$).

REGIONAL ROADS

As above, ECO estimated overall locally-owned regional roadway OM&P costs to be about $7.1 billion (2007$) from 2007–2035.

The OM&P costs for regional roads can vary depending on levels of maintenance. To achieve 90% of regional roads in fair or better condition, OM&P costs will likely need to increase from $230 million per year in 2007 to $244 million per year (2007$) in 2020, and climb to $260 million by

Table 4-4. Estimated regional roadway OM&P costs for cities and counties, 2007–2035 (millions of 2007$)

Year	Estimated Cost
2007	$230.5
2008	$231.6
2009	$232.8
2010	$233.9
2011	$233.9
2012	$235.0
2013	$236.1
2014	$237.3
2015	$238.4
2016	$239.6
2017	$240.7
2018	$241.9
2019	$243.1
2020	$244.2
2021	$245.4
2022	$246.6
2023	$247.8
2024	$249.0
2025	$250.2
2026	$251.4
2027	$252.6
2028	$253.8
2029	$255.1
2030	$256.3
2031	$257.5
2032	$258.8
2033	$260.0
2034	$261.3
2035	$262.6
Total	**$7,127.7**
Ann Avg	**$245.8**

Source: Metro 2004 RTP. Calculated and converted figures by ECONorthwest. Data represents estimated costs of OM&P at 90% of regional roads in fair or better condition.

Keeping the status quo level of road repair and the same size of the backlog of deficient pavement was estimated at $160 million per year for 2007 and increasing to $167 (2007$) million per year in 2020.

A review of the Critical Investments in Transportation from ODOT suggests that cities (statewide) expend about a third of what is needed to adequately maintain and preserve local paved roads. In some cases in the region this is true.

Based on analysis of ODOT data from surveys of Oregon cities and counties in 2006, transportation engineers at Kittelson and Associates, Inc., estimated OM&P costs in the three-county Metro area to be about $100 million per year. The consultant's analysis estimated that the region as a whole is spending only about half that amount on OM&P.

In another analysis, using available data received from local jurisdictions reporting OM&P *needs and expenditures*, ECO found that about 70% of OM&P needs are met in Washington County. The survey respondents reported a need of about $730 million in OM&P through 2025 with a shortfall of about $200 million representing their greater use of local funding sources.[4]

ECO's study of ODOT survey data of local jurisdictions (21 jurisdictions provided data for OM&P expenditure) estimated that an average total of $154 million per year (adjusted to 2007$) was expended in the region on OM&P from 2002–2005.[5] Given that this amount could be one-third, a half, or two-thirds of the region's need, future OM&P costs could reasonably be in the range of $230 to $460 million (2007$) per year.

Considering existing backlogs and a continually eroding infrastructure, trying to keep transportation facilities at a 90%-maintained level will remain a challenge and, unsurprisingly, be nearly impossible. Fully restoring roads that have fallen into major disrepair requires more resources than regularly maintaining the assets. Given that OM&P is typically underfunded and the many challenges of maintaining the system, a discussion of what is the appropriate amount to provide for OM&P is essential. Under federal guidelines, cities and counties are given the discretion determine what is "adequate."

COSTS FOR THE TRANSIT SYSTEM

The transit system in the region is provided by TriMet throughout most of the 3-county region and South Metro Area Rapid Transit (SMART) in the Wilsonville area. Costs in this section are estimated using data reported in Tri-Met's FY2006 Financial Issues Report #1, Financial Analysis and Forecast (Fall 2005) and the City of Wilsonville's Transit Master Plan (October 2006).

CAPITAL IMPROVEMENTS

A review of TriMet's forecast data and SMART's transportation plan (October 2006 draft) indicated steady growth in costs for capital expansion.

[4] See Table E-11 in Appendix E for raw data and documentation of Washington County's estimated needs and expenditures.

[5] See Tables E-7 A, B and C in Appendix E for a breakdown of capital and OM&P expenditures for individual jurisdictions.

ECO's analysis of available data estimated $1.2 billion (2007$) in capital costs from 2007 to 2035. On average, this is about $40 million per year (2007$) through 2035.

Table 4-5. Estimated capital expenditures for TriMet and SMART, 2007–2035 (millions 2007$)

Year	TriMet	SMART	Total
2007	$42.00	$0.42	$42.42
2008	$16.37	$0.44	$16.81
2009	$35.51	$0.46	$35.98
2010	$33.21	$0.49	$33.70
2011	$37.77	$0.51	$38.28
2012	$35.86	$0.54	$36.40
2013	$35.22	$0.57	$35.79
2014	$39.11	$0.59	$39.70
2015	$39.80	$0.63	$40.43
2016	$38.10	$0.66	$38.76
2017	$29.13	$0.69	$29.83
2018	$40.15	$0.73	$40.88
2019	$69.74	$0.76	$70.50
2020	$36.11	$0.80	$36.91
2021	$27.97	$0.84	$28.81
2022	$127.67	$0.89	$128.56
2023	$28.55	$0.93	$29.49
2024	$34.02	$0.98	$35.01
2025	$36.10	$1.03	$37.13
2026	$35.75	$1.09	$36.84
2027	$35.41	$1.14	$36.55
2028	$35.07	$1.20	$36.27
2029	$34.74	$1.26	$36.00
2030	$34.41	$1.33	$35.74
2031	$34.08	$1.39	$35.48
2032	$33.76	$1.47	$35.22
2033	$33.43	$1.54	$34.98
2034	$33.12	$1.62	$34.74
2035	$32.80	$1.70	$34.50
Total	**$1,124.97**	**$26.71**	**$1,151.68**
Ann Avg	**$38.79**	**$0.92**	**$39.71**

Source: Source: TriMet, FY 2006 Financial Issues Report #1, Financial Analysis and Forecast. TriMet. Fall 2005; City of Wilsonville Transit Master Plan, October 2006. Data calculations and conversion (to 2007$) by ECONorthwest.

Table 4-5 shows capital costs for TriMet changing unevenly from year to year through 2021. TriMet indicated a major increase in capital costs in 2022 followed by a major drop in 2023. Thereafter, costs were estimated to remain relatively even. Costs from 2026 to 2035 were based on the average annual growth rate or change in costs from 2007 to 2025, about 2%.

Projected costs for SMART were derived based on a projected growth of current costs for vehicle purchases and machinery and equipment capital. The agency also has two major capital projects anticipated to cost about $13 million

(2007$). These projects increase overall capital costs for SMART from $27 million to almost $40 million.

OPERATIONS, MAINTENANCE, AND PRESERVATION

The same review of TriMet's forecast data and SMART's transportation plan (October 2006 draft) indicated steady increases in costs for operations, maintenance, and preservation for transit. The highest costs will likely come from payroll and anticipated steady increases in fuel costs. ECO's analysis of available data estimated $13.5–15.0 billion in operations, maintenance, and preservation costs from 2007 to 2035. Overall in the region, OM&P costs are estimated at $320 in 2007 and rising to about $640 in 2035 (in 2007 dollars), or an average of about $465 million per year.

SUMMARY

This chapter provided estimates of transportation costs for road and transit projects in the region from 2007–2035, including costs for operations, maintenance and preservation and for modernization. Costs for OM&P and capital have been rising over the years. Thus the summary of costs in this chapter are approximate and estimates more likely to be low than high.

Table 4-1. Summary of estimated total costs for road and transit in the region by OM&P and capital improvements, 2007–2035 (billions of dollars)

	Roads	Transit
OM&P	$4–$8.6	$13.5–$15
Capital	$6–$7	$2

Source: Estimates calculated by ECONorthwest based on data from ODOT, TriMet, SMART, local TSPs, and local surveys.

Table 4.1 summarizes the estimated costs for roads and transit, by OM&P and capital, in the region from 2007 to 2035. OM&P for roads and transit is estimated to incur most the region's overall costs. This is expected based on anticipated likely increases in energy and growing labor costs and an expanding infrastructure to accommodate new growth. Fully restoring or repairing a road that has fallen into disrepair costs many more dollars that it does to regularly maintain the same facility. Given that funding all OM&P costs today is a challenge and will continue to be so in the future, covering the costs of new additions to the region's infrastructure will also be a significant hurdle. Decision-makers in the region will need to closely consider these factors in determining regional transportation priorities.

Chapter 5 Funding Gap for Transportation Needs in the Metro Region

This is preliminary and incomplete draft, but it gives a general direction

Chapter 3 provides estimates of revenues that are probably or possibly available for transportation projects in 2007–2035. Chapter 4 provides estimates of costs of major improvements to the regional transportation system and OM&P costs in the years ahead. This chapter compares those estimates in various ways to provide (1) an estimate of the difference between the costs of projects and programs included in the 2004 RTP and the revenues available (referred to as the "funding gap"),[1] and (2) ideas about how to fill the funding gap of the desired system.

OVERVIEW

The main point of this report is to get a rough idea of how big the gap is between "reasonably available revenues" and the likely costs of transportation investments over the planning period (to 2035). In this report, we are just looking for rough estimates to provide some context for the work that will be done in the first two quarters of 2007 to get to a list of projects whose costs are equal to refined estimates of, and political decisions about, reasonably available revenues.

As part of the development of the RTP in 2007, updated system costs will be established through project and program proposals that best meet the identified desired outcomes for the region's transportation system (Phase 3 of the 2035 RTP update). The process of identifying projects and programs may result in reduced RTP system costs through increased transportation service efficiencies, fewer overall projects, or reductions in project scopes.

Though cost-cutting measures (e.g. reducing the number, size or attributes of projects proposed for inclusion in the RTP) will be an inevitable part of the RTP process in 2007, *they are not part of the analysis in this chapter*. This analysis uses planning-level cost estimates as described in Chapter 3; it has no basis for estimating how those costs might be reduced by more efficient management or construction techniques. Moreover, the best evidence suggests that overruns are more likely than efficiency gains.[2] Similarly, at the level of generality of the 2004 RTP cost estimates, we have no basis for estimating how the projects might be

[1] There is a theoretical possibility that available revenues could exceed the costs of desired projects. That possibility has never been a reality in any regional transportation project that we are aware of and, as Chapters 3 and 4 show, is not the case in the Portland region.

[2] Flyvbjerg, Bent, Mette K. Skamris Holm, and Søren L. Buhl, 2002, "Underestimating Costs in Public Works Projects: Error or Lie?" Journal of the American Planning Association, vol. 68, no. 3, 279-295 found that, on average, comparable works come in over budget 9 times out of 10, but only by about 28 percent above initial estimates. Of the 258 projects studied, all completed over the past 70 years, the researchers found that rail projects typically see the greatest overruns, usually costing about 45 percent more than the public was told at the outset.

redefined to make them more cost-effective and no formal process to reference for retaining or dropping full projects. Thus, on the cost side we keep it simple and approximate. In this Financial Fact Base we *illustrate ways to reduce the funding gap primarily by increasing revenues* in various ways. We show various combinations of projects and revenue source that lead to different sized funding gaps.

THE FUNDING GAP

Chapters 3 and 4 give us the information we need to get a sense of the shortfall between available resources and expected costs between 2007 and 2035.

Chapter 3 shows that roughly $9 to $11 billion of "reasonably available" revenue is available for road-related expenditures (OM&P activities and modernization projects) over the planning period. Chapter 4 shows costs for road-related projects ranging from $10 to $15.5 billion. Thus, our estimates suggest a funding shortfall, in rough terms, in the range $1 – $5 billion for road-related projects over the planning period.

Over $11 billion of "reasonably available" revenue is estimated to be available for transit-related expenditures (OM&P activities and modernization projects) over the planning period; costs, however, are projected to be about $13 – $17 billion. Thus, our estimates suggest a funding shortfall, in rough terms in the range of $2 – $6 billion for transit-related projects.

Depending on the selection of regional projects, the combined road and transit funding gap could be between $3 – $11 billion over the planning period. That gap changes if (a) new revenue sources are secured, (b) costs are reduced (by changing the type, size, or implementation of projects, or by doing fewer of them), or (c) both.

ROADS AND HIGHWAYS

Table 5-1 shows a range of estimates of the potential funding gap for road-related projects.

Figure 5-1: Funding gaps for different road-related project-cost tiers (in billions of 2007 dollars)

			Estimated Revenue		
			Existing	E+	E++
Cost Assumptions	low	high	8.9	11.1	11.4
Estimated total costs	10	15.5	(1)–(6.6)	+1.1–(5.4)	+1.4–(4.1)
80% of estimated costs	8	12.4	+1–(3)	+3.1–(1.3)	+3.4–(1.0)
60% of estimated costs	6	9.3	+2.9–(0.4)	+5.1–1.8	+5.4–2.1

Source: Estimated by ECONorthwest using cost data from Metro 2004 RTP and revenue data from ODOT, Metro, and surveys completed by local jurisdictions and agencies.

To understand Table 5-1, one must first understand some of the assumptions used for its construction:

- All costs and revenues are in 2007 dollars.

- Figures in parentheses are negative numbers (or funding gap).
- Selection of a set of future projects is a topic for analysis in Winter and Spring 2007. Developing a project list that makes up 60% to 80% of the total estimated costs of all projects could be a part of the exercise. The process will help determine what set of projects should make up the updated RTP project list.

Our interpretation of Table 5-1 is:

- From a conservative perspective, existing plus conservative expansion of revenue (E+) and existing plus optimistic expansion of revenue (E++) would still fall short of covering the total roadway-related costs at the high end of the rough estimate.
- At 80% of total costs, the potential funding gaps decrease and indicate even potential for surplus funds.
- At 60% of total costs, funding gaps are generally eliminated. Reducing costs to this level (by, most likely, cutting projects until those on the final list add to only 60% of total costs of the original list) would be a considerable challenge

Moreover, costs of OM&P will grow as the transportation system grows. Recall from Chapter 3 that revenue specifically and only for OM&P is a smaller percentage of total revenue. However, OM&P costs are estimated to be about half of overall costs. Given that, deciding how much will be expended on OM&P at the local level will help determine what modernization projects can be effectively built in the region.

TRANSIT

Considering the funding gap for transit, OM&P will also play a major role in affecting the balance between available funds and anticipated costs. The majority of the $15 – $17 billion in total transit costs is attributable to operations, maintenance, and preservation ($13.5 – $15 billion). About $2 billion is anticipated for capital-related costs, of which $1.1 billion is earmarked for capital only and another $1.1 billion is flexible (it could be used for either capital or OM&P). While it appears that capital costs for transit may not be severe, OM&P costs will certainly test the system. With only about $9 billion expected from payroll taxes, bridging the $4 – $6 billion gap could require using more of the flexible funds or increasing payroll taxes to cover growing OM&P costs.

Metro would like ECO to provide a more detailed breakdown of the gap. Here is a quote from an email from Metro staff to ECO on 11/28 on the topic:

> The FFB needs to have a bottom line conclusion on the funding gap between identified needs and what can be funded with existing resources – we recommend the following categories for this:
>
> 1. ODOT operations, maintenance and preservation
> 2. ODOT modernization

3. Local operations, maintenance and preservation
4. Local modernization
5. Transit

FILLING THE GAP

EXAMPLES OF FISCALLY CONSTRAINED PACKAGES

Table 5-1 showed the amount of existing revenue available and that which would be available, given the conservative assumption that only a few adjustments will made by decisionmakers to generate revenue for future needed projects—specifically, the increase to the state gas tax and vehicle registration fees assumed by ODOT in its Financial Assumptions for the Development of Metropolitan Transportation Plans 2005-2030 document.

This section provides examples of packages that could expand from this baseline (existing plus conservative) but where new or expanded funding streams might still be considered "reasonably available" and could therefore meet the requirement for fiscal constraint.

Chapter 3 provides the information needed to get a sense of the kinds of revenues sources that could be introduced or expanded to reduce the funding gap. There are many, many ways that revenues could be raised, and the variations are hard to describe at a regional level.

A few examples illustrate the difficulties of describing a regional funding program.

- *System Development Charges (SDCs)*. Chapter 3 shows that different jurisdictions in the region have different policies regarding how aggressively SDCs will be used to fund transportation improvements that growth requires, and, more significantly, the amount of the legally justifiable costs that they will recover though SDCs. SDCs range from $1,000 to over $5,000 per single-family dwelling unit. Some of that variation may be explainable by different transportation circumstances, but the anecdotal evidence is that councils and commissions in some jurisdictions set fees based on what they think the market will bear rather than what it would take to fully fund growth-induced system improvements.

  In that context, how should one treat SDCs as a local source of revenue, and what are the implications for funding of the regional transportation system? One possibility is that what are needed are (1) a clear delineation of which roads will be considered part of the regional transportation system; (2) a clear statement about whether local governments should be required to have their SDCs include fees necessary to fund local, growth-induced needs for capacity improvements on regional facilities; and (3) a Metro policy saying that Metro expects funding from local governments

for regional improvements in proportion to the local, growth-induced contribution to the need for the improvement.

- *Timing of projects.* ****
- *Speculative, but potential, new future funding sources…*

Nonetheless, this report can help the discussion of funding packages by illustrating some. The packages we create are based on the following principles and assumptions:

- **Modernization (new projects that expand capacity) should not be financed by reducing maintenance to levels that are not cost effective**. As a general standard, pavement maintenance should occur before pavement condition deteriorate to a level that would require full replacement of the affected roadway. Additionally, many jurisdictions have a backlog of road maintenance. Though Metro and its RTP cannot compel cities, counties, or the state to fund a specific level of maintenance, it can take steps to discourage inefficient levels of maintenance. In particular, it can *assume* that local governments and the state will fund cost-effective maintenance first (before new construction), and then base its RTP project list on revenues estimated to be available after such maintenance is full funded.
- **A fiscally constrained RTP will probably be achieved by both increasing revenues and cutting projects**. Ultimately, the participants in the RTP process will probably get to a balance of projects and funding by first making decisions about the political limits of implementing new revenue sources and then determining which projects should be on the project list.

The following discussion shows a few packages that could meet the funding gap identified above. If the region can demonstrate that these packages are optimistic but realistic—specifically, that the necessary action will be taken to put these packages into place—these revenue expansions could be classified as "reasonably available" and the packages could be considered fiscally constrained. If the decision is not made to pursue these and make them part of a fiscally constrained RTP (for example, if projects were removed from the RTP instead) these packages could still be used as illustrative examples of funding mechanisms that address more ambitious needs.

***The following packages are just placeholders for now. ECO and Metro staff will decide how to describe packages that make sense. Here is a quote from an email from Metro staff to ECO on 11/28 on the topic:

> The FFB also needs to put out a plausible funding strategy that tries to get close to funding the estimated needs for planning period as a starting point for discussion – it represents a series of options for closing the gap. This should show how close we can get (but also highlight that a significant level of commitment is needed by our local/regional/state partners to make it happen). With this information, JPACT and the Council can then determine how

far they want to go. The report should also highlight the consequences of not making true on whatever commitments are agreed upon (e.g., scaled-back financially constrained revenue assumptions in next RTP update). Included in that strategy should be the following:

- Projects of statewide significance (with a finding of what it takes to fund 50% through tolls and fully fund 100% through tolls in orders of magnitude)
- Local street utility fees applied by all cities and counties at the highest level currently implemented. (with a finding of how close this gets to covering local OMP)
- Regional SDC applied at the highest level currently implemented (with a finding of how much this will generate for non-state projects)
- Assume the 1 cent per year state gas tax increase with 60% going to OMP of ODOT facilities and 40% for into modernization for local/non-state projects.
- LRT bonds and property tax bonds for LRT.

PACKAGE 1: CENTERS AND CORRIDORS

The set of projects that focus on access to and circulation improvements in designated regional centers and major corridors.

PACKAGE 2: MAJOR HIGHWAYS + TOLLING

The set of projects that focus on the major highway capital improvements. Consider the use of tolling to help finance projects.

PACKAGE 3: OM&P FOCUS AND ALTERNATIVE MODES PRIORITY

The set of projects that focus on funding OM&P activities at the 90%-level or above. While this may leave little for locals to contribute to large regional projects, the remaining smaller amount of funds could go to funding less expensive regional projects, i.e., for improving the bicycle and pedestrian connections throughout the region.

CONCLUSIONS AND NEXT STEPS

Section will may need to be revised after previous sections are completed

GETTING TO A FISCALLY CONSTRAINED SYSTEM

Arriving at a fiscally constrained system will depend not only on containing costs (what projects should be included on the list), but understanding what future resources are can be expected to be "reasonably available," as determined by local decision-makers in the region. It will also require an understanding that new growth will continually challenge local governments to maintain the existing system of regional roads within their jurisdiction.

Given the pattern of local government revenues sources, expenditures, and needs, it seems likely that for most local jurisdictions the current allocations of federal and state funding (primarily from gas taxes) and current local own-source revenues at 2007 levels will not be adequate to fund the backlog of maintenance and future on-going maintenance at cost-efficient levels. In that sense, there really is no money for modernization of the local components of the larger transportation system. There are, of course, many ways that local governments could generate revenue through taxes, fees, and in-kind contributions. The point that is relevant for the financing of the regional transportation system is that there is effectively no money available from local governments to contribute a match to regional facilities in their jurisdiction unless they defer maintenance, increase fees of existing funding mechanisms, add new revenue-generating fees or taxes, or require more transportation improvements as a condition of development.

With some new funding sources, a fiscally constrained system could be provided that would generate more funding for regional capital projects than what is projected from existing sources and ODOT forecasts from state and federal sources.

But with even additional revenue, it will still be a challenge to build all the desired projects in the region.

There are additional potential funding sources that are unlikely to be considered "reasonably available" but, perhaps called "speculative," which could illustrate how a more expansive "illustrative system" could be funded. These new funds could be in the form of toll roads to help finance new major projects in the region or a vehicle miles traveled (VMT) tax, akin to a gas tax but based on the number of miles a person drives, could help to pay for future OM&P activities.

NEXT STEPS

This Financial Fact Base will be used for discussion among decision-makers to decide what future revenue sources seem most reasonable to fund future projects. Regional decision-makers will have, in essence, provided a provisional estimate of "reasonably available" revenues for the region. That estimate will be the preliminary basis for a discussion of expenditures: what projects can and should be built with these funds?

The process will be informed by public participation. The actual project selection will occur in Spring 2007. After that, costs and revenues will be refined and an updated Financial Element of the RTP can be completed.